

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
FORMER MORSE HIGH SCHOOL 1941 AND 1968 ADDITIONS
826 HIGH STREET
BATH, MAINE**

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EXECUTIVE SUMMARY

The following presents the findings of Phase II Environmental Site Assessment (ESA) performed by Ransom Consulting, LLC (Ransom) for a portion of the Former Morse High School located at 826 High Street in the City of Bath, Sagadahoc County, Maine (the “Site”). Specifically, this Phase II ESA was conducted for the 1941 and 1968 additions to the former high school. The Phase II ESA was prepared for the City of Bath using program income from the City of Bath’s Brownfield Revolving Loan Fund (RLF) program. The City of Bath is exploring options to demolish existing Site buildings and redevelop the Site as the new Bath Fire Station.

On March 7, 2023 Ransom completed a Phase I ESA for the Site. The Phase I ESA identified a *recognized environmental condition (REC)* for the Subject Property due to its past use as a vocational school including an automotive shop which have the potential to have adversely impacted the environmental conditions of the Subject Property. Based on the findings from the Phase I ESA, Ransom developed a Conceptual Site Model (CSM), and the Site was targeted for additional investigation through the completion of a Phase II ESA. The CSM suggested that hazardous substances associated with the former automotive shop may have been used onsite including various automotive fluids, waste oil, and petroleum products. The substances may have been spilled on the floor and migrated to the observed floor drains.

The objective of the Phase II ESA was to collect sufficient data to confirm or dismiss the *REC* identified during the Phase I ESA, to identify potential exposure risks for current and future Site users.

Three floor drains were ultimately identified in the automotive repair bays of the former vocational school area of the Site buildings. Prior to starting the Phase II ESA investigation, Ransom contracted ProMark Utility Locator, Inc. (ProMark) to determine the location of sub slab utilities and attempt to identify the discharge location of the three drains and associated piping. ProMark utilized GPR and a utility sonde to map out the piping associated with the three drains and their observed oil water separators. ProMark was able to confirm that all three drains were connected to one another. A sub slab anomaly or void space was identified adjacent to the floor drain network. It is not clear if the sub slab anomaly was connected to the floor drain network. The utility inspection was unable to determine the discharge location of the floor drains.

To further attempt to find the discharge location of these three drains, Ransom, with the assistance of Bath Sewer District performed a dye test by placing dye tabs in the floor drains and continuously flushing the drains with potable water. Ransom and Bath Sewer District personnel monitored surrounding manholes and catch basins for the presence of dyed water; however, none was observed. The discharge location of the floor drains remains unconfirmed.

On April 6, 2023, Ransom performed the Phase II ESA at the Site to evaluate subsurface conditions in the area of the floor drain network. Based on the results of this Phase II ESA no contaminants of concern (COC) were identified that represent an exposure risk to future commercial workers or construction workers. Soil samples collected beneath the concrete slab in the area of the automobile repair bays indicated concentrations of various Extractable Petroleum Hydrocarbons (EPH) fractions compounds but were below Maine Department of Environmental Protection (MEDEP) Remedial Action Guideline (RAG) for “Commercial Worker” and “Construction Worker” exposure scenarios. Low-level Polycyclic Aromatic Hydrocarbons (PAHs) and Resource Conservation and Recovery Act (RCRA) 8 Metals were also detected in the soil samples above reporting limits but below their applicable MEDEP RAGs for



“Commercial Worker” and “Construction Worker” exposure scenarios. Volatile Organic Compounds (VOCs) were not detected above their applicable reporting limits.

Sub slab soil vapor samples collected in the automobile repair bays indicated various VOCs and Air Phase Petroleum Hydrocarbons (APH) at concentrations below their laboratory reporting limit and/or below their applicable MEDEP soil gas targets for “Indoor Air Commercial” exposure scenarios.

Drain water samples collected from Floor Drain 1 indicated concentrations of EPH fractions below their laboratory reporting limit and/or below their applicable MEDEP RAG for “Construction Worker” exposure scenarios. Polychlorinated biphenyls (PCBs) were not detected above their laboratory reporting limits.

Ransom conducted a Hazardous Building Materials Inventory (HBMI) concurrent with our Phase II ESA investigation, which included interior and exterior inspections of the 1968 and 1941 additions to the Former Morse High School. The HBMI identified asbestos containing building materials throughout the 1941 and 1968 additions. These materials will require abatement and disposal by a licensed asbestos abatement professional prior to building demolition.

Based on the information obtained during the Phase II ESA and HBMI, the City should be aware that there may be buried lines, vaults, or sumps associated with the floor drains and subsurface anomaly in the area of the former vocational school automotive repair bays. If these are encountered, an environmental professional should be contracted to determine if residual contamination is present and that proper environmental protocols are followed. The demolition contractor should be made aware of the floor drains and subsurface anomaly in the area of the automobile repair bays and any visual or olfactory evidence of contamination observed in this area during demolition or property redevelopment activities should be reported to the City of Bath’s environmental consultant and/or MEDEP in order to allow for appropriate soil management at that time.

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1.0 INTRODUCTION

The following report presents the findings of a Phase II Environmental Site Assessment (ESA) performed by Ransom Consulting LLC (Ransom) for a portion of the Former Morse High School located at 826 High Street in the City of Bath, Sagadahoc County, Maine (the “Site”). The Phase II ESA was performed by Ransom in conjunction with the United States Environmental Protection Agency (U.S. EPA) and the Maine Department of Environmental Protection (MEDEP).

The Phase II ESA was prepared for the City of Bath in support of potential demolition and redevelopment of the Site using the City of Bath’s Brownfields Revolving Loan Fund program income. The City of Bath is exploring options to demolish the current Site buildings and redevelop the Site as the new Bath Fire Station.

1.1 Purpose

On March 7, 2023, Ransom completed a Phase I ESA for the Site. The Phase I ESA identified a *recognized environmental condition (REC)* for the Subject Property due to its past use as a vocational school including an automotive shop which have the potential to have adversely impacted the environmental conditions of the Subject Property. Based on the findings from the Phase I ESA, Ransom developed a Conceptual Site Model (CSM) and the Site was targeted for additional investigation through the completion of Phase II ESA. The CSM suggested that hazardous substances associated with the former automotive shop may have been used onsite including various automotive fluids, waste oil, and petroleum products. These substances may have spilled on the floor and migrated to the observed floor drains.

In addition, based on the age of the Site building and information contained in previous Asbestos Hazard Emergency Response Act (AHERA) reports, a Hazardous Building Materials Inventory (HBMI) was completed in order to support future demolition of the Site building.

1.2 Special Terms and Conditions

This Phase II ESA was conducted in accordance with Ransom’s executed contract with the City of Bath. Authorization to perform this Phase II ESA was provided by the City of Bath. Furthermore, the Phase II ESA was completed in accordance with Ransom’s Site-Specific Quality Assurance Project Plan (SSQAPP), Addendum No. 68 Rev. 0), dated March 29, 2023.

The Phase II ESA report was prepared using the City of Bath’s Brownfields Revolving Loan Fund (RLF) program income. However, the services, findings, and conclusions noted herein, and associated documents provided to the client by Ransom are solely for the benefit of the City of Bath and their affiliated subsidiaries and their successors, assigns, and grantees. Other than for public information purposes, reliance or any use of this report by anyone other than the City of Bath for whom it was prepared, is prohibited.

Furthermore, reliance or use by any such third party without explicit authorization in the report does not make said third-party a beneficiary to Ransom’s contract with the City of Bath. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party’s risk. For the same reasons, no warranties or representations expressed or implied in this report are made to any such third party.

1.3 Limitations and Exceptions of Assessment

The Phase II ESA was executed in accordance with the scope of work proposed in the SSQAPP. Any additional revisions to the scope of work or methodologies outlined in the SSQAPP were implemented based on conditions encountered in the field and are discussed in Section 3.0. Furthermore, the findings provided by Ransom in this report are based solely on the information reported in this document and the results of limited explorations and confirmatory laboratory testing. Our findings and conclusions must be considered as our professional opinion concerning the significance of the limited data gathered during the course of the environmental assessments and field investigations.



2.0 BACKGROUND

2.1 Site Description, History, and Physical Setting

The Site is an approximately 2.11-acre portion of a larger 4.41-acre property identified by the Bath Assessor's Office as Map 26 Lot 001, also known as the former Morse High School.

The Site encompasses the 1968 addition and the 1941 addition to the former Morse High School. The 1968 addition is a two-story school building and includes a gymnasium, a wood shop, and three automotive garage bays. An asphalt parking lot is located to the north of the 1968 addition. The 1941 addition is a three-story building with an associated locker room and welding shop. The Site is currently vacant however, it was initially built as an addition to the former Morse High School. Phase II activities were limited to the 1968 and 1941 building additions and did not include the remainder of the former Morse High School building.

The original Morse High School building was constructed in 1935, with additions completed in 1941, 1968, and 1995. The high school operations of Morse High School were relocated to a new school facility in 2020, and the Site building has been vacant since that time. Prior to the area of the 1941 and 1968 additions being developed as a portion of the former Morse High School, the Site was occupied by St. Mary's church and its associated catholic school and nunnery housing. The St. Mary's church was the first recorded use of the Site.

The Site is provided with municipal water and sanitary sewer services. The Site building is currently heated by a boiler unit located in the original portion of the former Morse High School. Based on information provided by former environmental reports, no aboveground storage tanks (ASTs) or underground storage tanks (USTs) are located on the Site, however one 8,000-gallon AST is registered to the former Morse High School. This AST is located on the west side of the original 1935 building and fuels the boiler system in the basement of the original building.

Please refer to Figure 2, Site Plan, for the locations of key site features as well as areas of potential environmental concern at the Site.

2.2 Recognized Environmental Conditions and Environmental Concerns

On March 7, 2023 Ransom completed a Phase I ESA on behalf of the City of Bath in accordance with ASTM International Standard Practice E 1527-21 and U.S. EPA All Appropriate Inquire (AAI), 40 CFR Part 312. Based on the findings of Ransom's Phase I ESA, the past use as a vocational school including an automotive shop was identified as a REC. Hazardous substances associated with the former automotive shop may have been used onsite including various automotive fluids, waste oil, and petroleum products. The substances may have spilled on the floor and migrated to the observed floor drains. The discharge location of the floor drains was unknown.

Based on the findings of our Phase I ESA, it was Ransom's opinion that additional investigation was warranted to address the above-stated REC, document current Site conditions in relation to current regulatory cleanup guidelines and evaluate the suitability of the Site property for proposed demolition and commercial redevelopment.

In addition to the past Site use discussed above, certain ASTM non-scope considerations were reviewed in connection with the ages of the former Morse High School 1968 and 1941 additions. Specifically, asbestos-containing materials were identified in the former Morse High School 1968 and 1941 additions

during former AHERA building surveys. It is also possible that additional asbestos-containing materials may be present in the building that were not identified during AHERA surveys. Additionally, PCBs, mercury-containing fluorescent lamps and other potential universal waste may be present in the former Morse High School 1968 and 1941 additions. Depending on future Site redevelopment plans, these hazardous materials may require abatement/removal, special handling, and/or proper management/disposal during future renovation and/or demolition activities. Therefore, Ransom recommended that a Hazardous Building Materials Inventory (HBMI) be conducted concurrently with the recommended Phase II ESA.

2.3 Areas of Concern and Contaminants of Concern

Based on the REC presented in Ransom's Phase I ESA, the former automotive garage was identified as a potential Area of Concern (AOC 1) due to its former use as a vocational automotive garage. Additionally, the automotive garage was noted to have floor drains that spilled materials could have entered. The discharge location for the floor drains and their pipe condition as well as the potential impact on surrounding soils were unknown.

Contaminants of Concern (COC) associated with AOC 1 are Extractable Petroleum Hydrocarbons (EPH), Polycyclic Aromatic Hydrocarbons (PAHs), Volatile Organic Compounds (VOCs), Air Phase Petroleum Hydrocarbons (APH), Resource Conservation and Recovery Act Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver), Hexavalent Chromium (Hex Chrome), and PCBs. If present, these contaminants potentially would be detected in subsurface soil and soil gas associated with the floor drain located in the former automotive repair bays. Potential exposure routes associated with the COCs at the Site include direct contact with impacted soils and ingestion of contaminated dust, particularly during any construction and earthwork-related activities at the Site. Public water is supplied to the Site and vicinity; therefore, ingestion of impacted groundwater does not pose a significant risk at this time. Additionally, several of these COCs are volatile and may impact soil vapor at the Site (if significant petroleum-impacted soil is present), which has the potential to migrate into the Site building or nearby structures (vapor intrusion) or through utility corridors.

Additionally, building structures and/or materials were identified as a potential source area of contamination (AOC 2) due to the potential presence of ACM and/or other hazardous building materials. Any redevelopment activities which involve the renovation or demolition of the former Morse High School 1968, and 1941 additions will require an inspection for ACM. Other potentially hazardous building materials, including PCB-containing caulking/sealants and light ballasts, mercury containing fluorescent lamps, and other "universal" wastes may be present in the buildings. Identification of potentially hazardous building materials will be necessary prior to building demolition in order to protect the safety of Site workers and the general public, and to maintain compliance with applicable storage, maintenance, and/or disposal regulatory criteria.

3.0 INVESTIGATION METHODOLOGY

The Phase II ESA was designed to collect sufficient data to characterize the environmental condition of the Site in relation to current risk-based regulatory standards, identify if environmental risk mitigation measures are necessary to facilitate and support property reuse/redevelopment and identify any potential exposure risks to construction/utility workers during future redevelopment and/or earthwork at the Site.

The scope of work for the Phase II ESA was based on the conceptual site model presented in the SSQAPP and included a floor drain evaluation, the advancement of two surficial soil borings, collection of soil samples for laboratory analysis from the aforementioned borings and the collection of two sub slab soil vapor samples. A HBMI including assessment of suspect asbestos-containing materials, PCB-containing materials, and universal wastes was completed in conjunction with the Phase II ESA activities. Findings of the HBMI are provided under separate cover.

3.1 Floor Drain Discharge Evaluation

In an effort to confirm the discharge location of the previously identified floor drains, Ransom conducted an evaluation of the floor drain system on April 6 and 7, 2023. Upon initiation of the Phase II ESA, Ransom confirmed the presence of three floor drains; one associated with each of the three vehicle bays in the former Vocational School automotive garage. The observed floor drain locations are shown on Figure 2.

The floor drains were initially evaluated on April 6, 2023. Each floor drain is associated with an apparent clean-out structure. Oily water with petroleum odor was observed in each of the floor drains. Based on this observation, Ransom personnel collected a sample (D101) of the oily water from drain location Drain 1 (refer to Figure 3). The drain water sample was submitted for analysis of Extractable Petroleum Hydrocarbons (EPH) and PCBs. For quality assurance purposes, a duplicate sample (DUP) was also collected from location D101.

On April 6, ProMark Utility Location, Inc (ProMark) of Scarborough, Maine. ProMark utilized ground penetrating radar (GPR) and a utility sonde to evaluate the floor drain system. According to the information provided by ProMark, all three floor drains were connected to each other via underground piping. A subsurface anomaly or void space located beneath the concrete floor slab was also identified adjacent to the floor drain system. Concrete coring in the area of the subsurface anomaly identified what appeared to be a structure beneath the concrete slab floor. It is suspected that the floor drains may be connected to this sub-slab structure. The approximate piping layout is depicted on Figure 3.

On April 7, 2023, Ransom and Bath Sewer District personnel conducted a dye test of the floor drain system. Industrial strength dye was placed in each of the floor drains, and the drains were continuously flushed with potable water. Ransom and Bath Sewer District Personnel continuously monitored two identified manholes and one stormwater catch basin which were identified in proximity to the Site building and determined to be the most likely discharge locations. These locations are indicated on Figure 2. After continuously flushing the drain and monitoring various locations for approximately one hour, Ransom was unable to confirm discharge of the floor drains to either the municipal sewer system or to the storm drain system.

3.2 Soil Boring Advancement and Soil Sample Collection

On April 6, 2023, Ransom observed the advancement of two soil borings (SS101 and SS102) in field selected areas surrounding the suspected drainage piping identified by ProMark. Soil sample locations

are shown on Figures 2 and 3. The soil borings were advanced by Environmental Projects Inc. (EPI) using a concrete core drill and a hand auger. Each boring was advanced to approximately 6-inches below the bottom of the concrete, to coincide with the reported depth of the suspected piping. Samples were collected at approximately the same depth as the underground drain piping.

3.3 Qualitative Field Screening

Soil samples collected during the advancement of the soil borings were screening for the presence of total volatile organic compounds (TVOCs), using a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp and calibrated to an isobutylene standard. Neither sample exhibited a petroleum odor. Sample (SS101) had an organic vapor reading of 151 parts per billion (ppb) and sample (SS102) had an organic vapor reading of 274 ppb using a PID in accordance with MEDEP's SOP#TS004.

3.4 Soil Sampling and Analytical Testing

Soil samples were submitted to Alpha Analytical LLC (Alpha) of Westborough Massachusetts, for chemical analysis. Soil samples for non-volatile analysis were homogenized in the field and transferred into laboratory-prepared containers. The samples were preserved in the field in accordance with applicable protocols and delivered on ice under chain-of-custody protocol for laboratory analysis. Soil samples were submitted for the following chemical analyses based on the CSM presented in the SSQAPP:

1. EPH fractions, including target PAHs by MEDEP Method EPH-04-1 and U.S. EPA method 8270D via Selective Ion Monitoring (SIM);
2. RCRA 8 Metals including Hex Chrome by U.S. EPA Method 6010C; and
3. VOCs by U.S EPA Method 8260C

A duplicate soil sample (SSDUP) was collected from surficial soil sample (SS101) and submitted for laboratory analysis for quality assurance/quality control (QA/QC) protocols as outlined in the SSQAPP.

3.5 Soil Vapor Sample Collection and Analytical Testing

On April 6, 2023 Ransom collected two soil vapor samples (SV101 and SV102) from below the slab (sub slab) of the former vocational automotive garage. Sub slab vapor locations were advanced by EPI using a hand drill. Teflon-lined tubing was inserted into the soil directly under the concrete slab and was sealed with bentonite clay. Soil vapor parameters were recorded for ambient air conditions and from the vapor point before and after sampling to determine if a complete seal was achieved. Soil vapor parameters are included on the Soil Gas Sampling Field Sheets included in Appendix A.

Soil Vapor samples were collected using a 2.7-liter SUMMA canister set to collect samples over an approximately 15-to-20-minute period. Soil vapor samples were submitted to Alpha of Westborough Massachusetts, for chemical analysis. Soil vapor samples were submitted for analysis of VOCs by U.S. EPA Method TO-15 and APH compounds.

4.0 RESULTS

The following subsections present the results of the Phase II ESA. Soil sample analytical results are summarized in Table 1. Soil vapor analytical results are summarized in Table 2. Drain water results are included in Table 3. A copy of the laboratory chemical analysis data report is provided as Appendix C.

4.1 Comparison to Regulatory Standards and Guidelines

The analytical results of soil, drain water, and soil vapor samples collected at the Site were compared to MEDEP Bureau of Remediation and Waste Management's (BRWM's) "*Remedial Action Guidelines (RAGs) for Site Contaminated with Hazardous Substances*," dated May 1, 2021.

Since the Site is proposed to be redeveloped for commercial purposes, the MEDEP RAGs for "Commercial" exposure scenario was utilized as the guidance standard for soil and soil vapor contaminant concentrations. In addition, potential exposure risks to Site workers during future earthwork-related activities and utility work (i.e., subsurface water and sewer lines) may exist at the Site and vicinity. Therefore, "Excavation/Construction Worker" scenarios also were used to evaluate the soil sample results as well as the drain water sample result.

Ransom utilized MEDEP's published background concentrations, established in the MEDEP RAGs, to determine background conditions for soil samples collected at the Site, specifically for arsenic, lead, and PAHs. MEDEP's published background concentrations are included in Table 1 with the soil sample analytical results.

4.2 Summary of Laboratory Analytical Results

Evidence of surficial petroleum discharges associated with the former vocational automotive garage drains was not indicated through field observations or laboratory analytical results. As shown in Table 1, all EPH fractions in sample (SS101) were below reporting limits. EPH fractions in sample (SS102) were below reporting limits in all compounds except for C11-C22 Aromatics, which were above detection limits but below MEDEP RAGs for "Commercial Worker" and "Construction Worker" exposure scenarios. Low-level PAHs and RCRA 8 Metals were detected in both samples (SS101 and SS102) above reporting limits but below their applicable MEDEP RAGs for "Commercial Worker" and "Construction Worker" exposure scenarios. All VOC compounds were below their applicable reporting limits.

Sub slab soil vapor samples SV101 and SV102 indicated low concentrations of various VOCs and APH compounds. However, the detected concentrations did not exceed the MEDEP soil gas targets for Commercial exposure scenarios. Soil gas targets were calculated by applying an attenuation factor of 0.03 to the MEDEP RAGs for Indoor Air.

Drain water sample D101 indicated concentrations of various EPH compounds. As shown in Table 3, the detected concentrations did not exceed the MEDEP RAGs for Groundwater "Construction Worker" exposure scenarios. The drain water was also analyzed for PCB's which were not detected above the laboratory reporting limits.

5.0 QUALITY ASSURANCE

The contracted laboratory, Alpha Analytical Inc. (Alpha) of Westborough, Massachusetts, provided Level II analytical data according to U.S. EPA protocols and laboratory data validation guidance included in Ransom's Generic QAPP for Brownfield sites in Maine. Alpha provided the following information in analytical reports:

1. Data results sheet;
2. Method blank results;
3. Surrogate recoveries and acceptance limits;
4. Spike/duplicate results/acceptance limits;
5. Laboratory control sample results;
6. Description of analytical methods and results; and
7. Other pertinent results/limits as deemed appropriate.

As outlined in the Generic QAPP, at the completion of the field tasks and receipt of the analytical results, a data usability analysis was conducted to document the precision bias, accuracy, representativeness, comparability, and completeness of the results. The following sections present this analysis.

5.1 Precision

Precision measures the reproducibility of measurements. The precision measurement is established using the relative percent difference (RPD) between the duplicate sample results. Relative percentage differences were calculated for soil, and vapor samples where both sample and duplicate values were greater than five times the Practical Quantitation Limit (PQL) of the analyte. The RPD is calculated as follows:

$$RPD = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Mean of the Two Results}} \times 100$$

One duplication soil sample (SSDUP) was collected from the surficial soil sample (SS101) and was submitted for the laboratory analysis of VOCs, EPH fractions, PAHs, and metals (RCRA 8 and Hex Chrome). A duplicate soil vapor sample (SVDUP) was collected from the sub slab vapor sample (SV101) and was submitted for laboratory analysis of VOCs and APH. One duplicate drain water sample was collected from drain water sample (D101) and was submitted for the laboratory analysis of EPH fractions with PAHs, and PCBs. The results from the soil and soil vapor sample and duplicate samples were within 50% RPD and 35% RPD, respectively. The drain water sample had C19-C36 Aliphatics that exceeded the 35% RPD for groundwater. This exceedance is likely a result of the sample being a non-homogeneous grab sample from the small volume of liquid within the floor drain. A summary of duplicate sample analytical results and calculated RPDs is presented in the attached Table 4.

5.2 Bias

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias assessments are made using personnel, equipment, and spiking materials or reference materials, as independent as possible from those used in the calibration of the measurement system. Bias assessments were based on the analysis of spiked samples, so that the effect of the matrix on recovery is incorporated into the assessment. A documented spiking protocol and consistency in following that protocol are important to obtaining meaningful data quality estimates.

Matrix spike and matrix spike duplicates samples (MS/MSD) were used to assess bias as prescribed in the specified methods. Acceptable recovery values were within the recoveries specified by each of the analysis methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods. The lab provides quality control non-conformance reports that indicate if Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD) and/or MS/MSD had low, failing or high recoveries, and if the sample results were affected. Likewise, the lab reports any compounds that had failing RPDs in the LCS/LCSD pair or the MS/MSD pair. This indicates the percentage difference between the lab sample and its duplicate or the spike and its duplicate.

Extractable Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons via SIM

There were no bias issues identified by the laboratory in the soil samples collected and analyzed for EPH fractions and target PAHs via SIM. However, the laboratory noted the surrogate recoveries for the drain water sample (D101) and duplicate (DDUP) were below acceptable recovery limits, suggesting a potentially low bias in these results.

Metals

There were no bias issues identified by the laboratory in the soil samples collected and analyzed for RCRA 8 metals or hexavalent chromium.

PCBs

There were no bias issues identified by the laboratory in the drain water samples collected and analyzed for PCBs.

VOCs

The laboratory noted that the soil samples submitted for VOC low-level analysis were received beyond the 48-hour hold time for freezing. This potentially low bias is not expected to interfere with our ability to identify exposure risks to future commercial occupants or constructions workers at the Site. There were no bias issues identified by the laboratory in the soil vapor samples collected and analyzed for VOCs.

APH

There were no bias issues identified by the laboratory in the soil vapors samples collected and analyzed for APH.

5.3 Accuracy

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systemic error. Therefore, it reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. For semi-volatile organic compounds, surrogate compound recoveries are also used to assess accuracy and method performance for each sample analyzed. Analysis of performance evaluation samples will also be used to provide additional information for assessing the accuracy of the analytical data being produced. Both accuracy and precision are calculated for each analytical bath and the associated sample results are interpreted by considering these specific measurements. The lab provides a non-conformance summary that reports if all of the quality control criteria, including initial calibration, calibration verification, surrogate recovery, holding time, and method accuracy/precision for analysis were within acceptable limits. According to the laboratory, unless noted in the non-conformance summary, all of the quality control criteria for these analyses were within acceptable limits.

5.4 Representativeness

Objectives for representativeness are defined for each sampling and analysis task and are a function of the investigation objectives. Representativeness was accomplished during this project through use of standard field, sampling, and analytical procedures. All objectives for sampling and analytical representativeness, as specified in the SSQAPP were met.

5.5 Comparability

Comparability is the confidence with which one data set can be compared to another data set. The objective for this QA/QC program is to produce data with the greatest possible degree of comparability. Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions, and using standard and comprehensive reporting formats. Complete field documentation was used, including standardized data collection forms to support the assessment of comparability. Historical comparability shall be achieved through consistent use of methods and documentation procedures throughout the project.

5.6 Completeness

Completeness is calculated by comparing the number of samples successfully analyzed to the number of samples collected. The goal for completeness is 95 percent. The completeness for this project was 100 percent as there were no samples that could not be analyzed due to holding time violations, samples spilled or broken or any other reason.

6.0 CONCLUSIONS

Based on the result of this Phase II ESA, no contaminants of concern were detected in any of the tested media that may present an exposure risk requiring supplemental remedial activities or mitigation measures to be conducted.

Attempts to confirm the discharge location of the three observed floor drains in the automotive repair bays of the former vocational school's area of the Site buildings were unsuccessful. ProMark identified piping between the three drains and confirmed the three drains are connected and discharged to an unknown location. A subsurface anomaly or void space was identified adjacent to the floor drain system. Concrete coring in the area of the subsurface anomaly identified what appeared to be a structure beneath the concrete slab floor. The dye test conducted in conjunction with the floor drain system failed to confirm connection to either the municipal sewer system or the storm drain system. The discharge location of the floor drain system remains unknown.

Based on the information obtained during this Phase II ESA soil directly under the concrete slab of the former vocational automotive garage contained low-level EPH fractions with target PAHs and metals. All contaminant concentrations were below applicable MEDEP RAGs for "Commercial" and "Construction Worker" exposure scenarios. No olfactory evidence of petroleum or other hazardous substances was observed during soil sampling.

Sub slab soil vapor samples collected in the automobile repair bays indicated various VOCs and APH at concentrations below their laboratory reporting limit and/or below their applicable MEDEP soil gas targets for "Indoor Air Commercial" exposure scenarios.

Drain water samples collected from Floor Drain 1 indicated concentrations of EPH fractions below their laboratory reporting limit and/or below their applicable MEDEP RAG for "Construction Worker" exposure scenarios. PCBs were not detected above their laboratory reporting limit.

Results of the floor drain investigation conducted during this assessment were inconclusive. Soil and soil vapor results collected during the current investigation do not suggest significant contamination beneath the concrete slab floor in the automotive repair bays of the former vocational school's area of the Site buildings. However, additional observation and investigation may be warranted if soils in this area are to be disturbed or relocated during future building demolition and property redevelopment.

Ransom conducted an HBMI concurrent with our Phase II ESA investigation, which included interior and exterior inspections of the former Morse High School 1941 and 1968 Additions. The HBMI identified various asbestos containing materials and universal wastes throughout the Site building. These materials will need to be properly abated and/or removed prior to future demolition of the building.

7.0 RECOMMENDATIONS

Based on the information obtained during the Phase II ESA and HBMI, the City should be aware that there may be buried lines, vaults, or sumps associated with the floor drains and subsurface anomaly in the area of the former vocational school automotive repair bays. If these are encountered, an environmental professional should be contracted to determine if residual contamination is present and that proper environmental protocols are followed. The demolition contractor should be made aware of the floor drains and subsurface anomaly in the area of the automobile repair bays and any visual or olfactory evidence of contamination observed in this area during demolition or property redevelopment activities should be reported to the City of Bath's environmental consultant and/or MEDEP in order to allow for appropriate soil management at that time.

8.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

Ransom performed services in a manner consistent with the guidelines set forth in the ASTM International (ASTM) E 1903-97 (Standard Practices for Environmental Site Assessments: Phase II Environmental Site Assessment Process), and in accordance with the scope of work and standard operating procedures outlined in the Generic QAPP and SSQAPP.

The following Ransom personnel possess the sufficient training and experience necessary to conduct a Phase II Environmental Site Assessment, and from the information generated by such activities, have the ability to develop opinions and conclusions regarding recognized environmental conditions in connection with the Site.



Sarah Mazerolle
Project Engineer

Environmental Professionals:



Eriksen P. Phenix, L.G.
Project Geologist



Stephen J. Dyer, P.E.
Bath Brownfields Program Manager

TABLE 1: Soil Sample Laboratory Analytical Results
Phase II Investigation
Former Morse High School 1941 and 1968 Additions
826 High Street
Bath, Maine

Sample Location	SS101	SS102	MEDEP Remedial Action Guidelines for Sites Contaminated with Hazardous Substances (May 1, 2021)			
Sample Identification	L2318873-01	L2318873-01				
Sample Depth (ft bgs)	0-6"	0-6"	Commercial Worker (0-2 Feet bgs)	Excavation/ Construction Worker (All Soil Depths)	Undeveloped Maine Background (All Soil Depths)	Rural Developed Maine Background (All Soil Depths)
Exposure Scenario Based on Soil Sample Depth (ft bgs)	Park User & Excavation/Construction Worker	Park User & Excavation/Construction Worker				
Date Collected	4/6/2023	4/6/2023				
Volatile Organic Compounds (VOCs)						
All VOCs	BRL (Varies)	BRL (Varies)	Varies	Varies	NE	NE
Polycyclic Aromatic Hydrocarbons (PAHs)	Concentrations in Milligrams per Kilogram (mg/kg)					
Acenaphthene	BRL(0.0073)	0.0093	62,000	130	NE	0.1
2-Chloronapthalene	BRL(0.0073)	BRL(0.0071)	82,000	960	NE	0.2
Fluoranthene	0.061	0.17	41,000	48,000	NE	0.3
Napthalene	BRL(0.0073)	BRL(0.0071)	120	48,000	NE	NE
Benzo(a)anthracene	0.034	0.096	280	96,000	NE	0.2
Benzo(a)pyrene	0.034	0.1	29	72,000	NE	0.8
Benzo(b)fluoranthene	0.046	0.12	290	100,000	NE	0.3
Benzo(k)fluoranthene	0.012	0.036	2,900	24,000	NE	2
Chysene	0.034	0.089	29,000	72,000	NE	2
Acenpthylene	BRL(0.0073)	0.011	45,000	1,700	NE	0.9
Anthracene	0.0084	0.021	100,000	100,000	NE	1
Benzo(ghi)perylene	0.02	0.066	23,000	1,700	NE	1.3
Fluorene	BRL(0.0073)	0.0073	41,000	17,000	NE	0.7
Phenthrene	0.036	0.087	23,000.0	9.9	NE	1.5
Dibenzo(a,h)anthracene	BRL(0.0073)	0.015	29	1,700	NE	0.4
Indeno(1,2,3-cd)pyrene	0.024	0.08	290.0	170	NE	0.3
Pyrene	0.051	0.15	31,000	72,000	NE	0.6
Extractable Petroleum Hydrocarbons (EPH)	Concentrations in Milligrams per Kilogram (mg/kg)					
C9-C18 Aliphatics	BRL(7.43)	BRL(6.96)	14,000	4,800	NE	NE
C19-C36 Aliphatics	BRL(7.43)	BRL(6.96)	100,000	100,000	NE	NE
C11-C22 Aromatics	BRL(7.43)	11.5	33,000	74,000	NE	NE
RCRA 8 Metals	Concentrations in Milligrams per Kilogram (mg/kg)					
Arsenic	6.74	7.08	41	41.0	16.0	NE
Barium	27.70	22.40	100,000	100,000.0	470.0	NE
Cadmium	BRL(0.435)	BRL(0.414)	1,400	1,400.0	0.3	NE
Chromium	13.30	10.20	100,000	100,000.0	100,000.0	NE
Lead	10.30	11.10	440	160.0	32.0	NE
Mercury	BRL(0.083)	BRL(0.077)	3	3.1	NE	NE
Selenium	BRL(0.869)	BRL(0.828)	8,000	1,700.0	0.6	NE
Silver	BRL(0.217)	BRL(0.207)	8,000	1,700.0	NE	NE

NOTES:
MEDEP = Maine Department of Environmental Protection
mg/kg = milligrams per kilogram; J= Estimated concentration;
BRL = Not detected above laboratory reporting limit as noted in parenthesis; NA= Not Analyzed; NE= Indicates that a standard or guideline is "not established" for the referenced parameter.
Values in **bold** text exceed applicable MEDEP RAGs for Commercial and/or Excavation/Construction Worker exposure.
Values in *italic* text exceed applicable MEDEP RAGs for Leaching to Groundwater.

TABLE 2: Soil Vapor Sample Laboratory Analytical Results
Phase II Environmental Site Assessment
Forn Former Morse High School 1941 and 1968 Additions
826 High Street
Bath, Maine

Sample Identification	SV101	SV102	MEDEP Soil Gas Targets ⁽¹⁾
Sampling Date	4/6/2023	4/6/2023	Commercial
Air Petroleum Hydrocarbons	Concentrations in ug/m³		
1,3-Butadiene	ND	31	136.7
Methyl tert butyl ether	ND	ND	15666.7
Benzene	1.2	ND	533.3
C5-C8 Aliphatics, Adjusted	200	4200	29333.3
Toluene	1.6	ND	733333.3
Ethylbenzene	ND	ND	1633.3
p/m-Xylene ⁽²⁾	ND	ND	14666.7
o-Xylene ⁽²⁾	ND	ND	14666.7
Naphthalene	2.3	ND	120.0
C9-C12 Aliphatics, Adjusted	530	ND	29333.3
C9-C10 Aromatics Total	18	ND	7333.3
Volatile Organic Compounds	Concentrations in ug/m³		
Propylene	3.01	73	NE
Dichlorodifluoromethane	2.3	2.32	14666.7
Chloromethane	BRL(0.413)	0.772	13000.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	BRL(1.40)	BRL(1.40)	NE
Vinyl chloride	BRL(0.511)	BRL(0.511)	933.3
1,3-Butadiene	BRL(0.442)	14.5	136.7
Bromomethane	BRL(0.777)	BRL(0.777)	733.3
Chloroethane	BRL(0.528)	BRL(0.528)	1466666.7
Ethyl Alcohol	BRL(0.942)	33.9	NE
Vinyl bromide	BRL(0.874)	BRL(0.874)	126.7
Acetone	48.5	387	3333333.3
Trichlorofluoromethane	1.32	1.53	NE
iso-Propyl Alcohol	2.3	8.41	NE
1,1-Dichloroethene	BRL(0.793)	BRL(0.793)	29333.3
Methylene chloride	BRL(1.74)	BRL(1.74)	86666.7
3-Chloropropene	BRL(0.626)	BRL(0.625)	146.7
Carbon disulfide	BRL(0.623)	15.5	103333.3
1,1,2-Trichloro-1,2,2-Trifluoroethane	BRL(1.53)	BRL(1.53)	NE
trans-1,2-Dichloroethene	BRL(0.793)	BRL(0.793)	116666.7
1,1-Dichloroethane	BRL(0.809)	BRL(0.809)	2566.7
Methyl tert butyl ether	BRL(0.721)	BRL(0.721)	15666.7
Vinyl acetate	BRL(3.52)	BRL(3.52)	29333.3
2-Butanone	4.69	98.2	733333.3
cis-1,2-Dichloroethene	BRL(0.793)	BRL(0.793)	116666.7
Ethyl Acetate	BRL(1.80)	BRL(1.80)	NE
Chloroform	BRL(0.977)	1.54	176.7
Tetrahydrofuran	BRL(1.47)	BRL(1.47)	293333.3
1,2-Dichloroethane	BRL(0.809)	BRL(0.809)	156.7
n-Hexane	1.34	8.88	NE
1,1,1-Trichloroethane	BRL(1.09)	BRL(1.09)	733333.3
Benzene	0.695	18.3	533.3
Carbon tetrachloride	BRL(1.26)	BRL(1.26)	666.7
Cyclohexane	BRL(0.688)	1.76	866666.7
1,2-Dichloropropane	BRL(0.924)	127	600.0
Xylene (Total) ⁽²⁾	12.3	BRL(0.924)	14666.7
Bromodichloromethane	BRL(1.34)	BRL(1.34)	110.0
Volatile Organic Compounds	Concentrations in ug/m³		
1,4-Dioxane	BRL(0.721)	BRL(0.721)	833.3
Trichloroethene	BRL(1.07)	BRL(1.07)	293.3
2,2,4-Trimethylpentane	BRL(0.934)	24.1	NE
Heptane	2.84	13.1	NE
cis-1,3-Dichloropropene	BRL(0.820)	BRL(0.908)	NE
4-Methyl-2-pentanone	2.63	5.9	433333.3
trans-1,3-Dichloropropene	BRL(0.908)	BRL(9.08)	NE
1,1,2-Trichloroethane	BRL(1.09)	BRL(1.09)	29.3
1,2-Dichloroethene (total)	BRL(0.793)	BRL(0.793)	NE
Toluene	4.48	34.6	733333.3
1,3-Dichloropropene, Total	BRL(0.820)	BRL(0.908)	1033.3
2-Hexanone	BRL(0.908)	4.47	4333.3
Dibromochloromethane	BRL(1.7)	BRL(1.70)	NE
1,2-Dibromoethane	BRL(1.54)	BRL(1.54)	6.7
Tetrachloroethene	34	51.4	6000.0
Chlorobenzene	BRL(0.921)	BRL(0.921)	7333.3
Ethylbenzene	2.02	36.4	1633.3
p/m-Xylene ⁽²⁾	7.38	96.9	14666.7
Bromoform	BRL(2.07)	BRL(2.07)	3666.7
Styrene	BRL(0.852)	2.76	146666.7
1,1,2,2-Tetrachloroethane	BRL(1.37)	BRL(1.37)	70.0
o-Xylene ⁽²⁾	4.95	30	14666.7
4-Ethyltoluene	2.57	11	NE
1,3,5-Trimethylbenzene	6.83	19.4	8666.7
1,2,4-Trimethylbenzene	17.2	49.2	8666.7
Benzyl chloride	BRL(1.04)	BRL(1.04)	83.3
1,3-Dichlorobenzene	BRL(1.20)	BRL(1.20)	NE
1,4-Dichlorobenzene	BRL(1.20)	BRL(1.20)	366.7
1,2-Dichlorobenzene	BRL(1.20)	BRL(1.20)	29333.3
1,2,4-Trichlorobenzene	BRL(1.48)	BRL(1.48)	293.3
Naphthalene	BRL(1.05)	8.28	120.0
Hexachlorobutadiene	BRL(2.13)	BRL(2.13)	186.7

NOTES:
(1) Soil Gas Targets derived by applying an attenuation factor of 0.03 to the Maine Department of Environmental Protection Remedial Action Guidelines for the Indoor Air Exposure Pathway, dated May 1, 2021.
(2) Values calculated based on MEDEP Commercial Indoor Air RAG for total xylenes (440 ug/m3)

NE= Indicates that a standard or guideline is "not established" for the referenced parameter.

Values in bold text exceed applicable Soil Gas Targets for commercial use.

Values with italic text indicate laboratory reporting limits that exceed applicable Soil Gas Targets for commercial use.

TABLE 3: Drain Water Sample Laboratory Analytical Results
Phase II Investigation
Former Morse High School 1941 and 1968 Additions
826 High Street
Bath, Maine

Drain Water Sample Identification	D101	MEDEP Remedial Action Guidelines for Sites Contaminated with Hazardous Substances (May 1, 2021) ¹
Date Collected	4/7/2023	Groundwater Construction Worker
EPH with PAH	Concentrations in ug/L	
C9-C18 Aliphatics	3080	3,700
C19-C36 Aliphatics	19900	100,000
C11-C22 Aromatics	19000	100,000
Napthalene	BRL(4)	19
2-Methylnapthalene	BRL(4)	1,500
Acenaphthene	BRL(4)	7,400
Fluorene	BRL(4)	100,000
Phenanthrene	BRL(4)	58,000
Anthrecene	BRL(4)	100,000
Fluoranthene	BRL(4)	100000
Pyrene	BRL(4)	36,000
Benzo(a)anthracene	BRL(4)	470
Chrysene	BRL(4)	100,000
Benzo(b)fluoranthene	BRL(4)	11,000
Benzo(k)fluoranthene	BRL(4)	100,000
Benzo(a)pyrene	BRL(2.)	11,000
Indeno(1,2,3-cd)Pyrene	BRL(4)	100,000
Dibenzo(a.h)anthracene	BRL(4)	26,000
Benzo(ghi)perylne	BRL(4)	100,000
PCB	Concentrations in ug/L	
PCB Total	BRL(0.149)	67

NOTES:
1. MEDEP = Maine Department of Environmental Protection
2. ug/l = microgram per liter= 1 parts per billion (ppb); ng/l= nanogram per liter= 1 parts per trillion (ppt).
3. BRL = Not detected above laboratory reporting limit as noted in parenthesis;
4. Values in **bold** text exceed Maine's
5. Values with *italic* text have laboratory detection limits that exceed MEDEP RAGs for Residential or Construction Worker exposure scenarios.

TABLE 4: DUPLICATE SAMPLE LABORATORY ANALYTICAL RESULTS

Phase II Environmental Site Assessment
Former Morse High School 1941 and 1968 Additions
826 High Street
Bath, Maine

Soil Sample Duplicate Results			
Sample Location	B102 (B104 PFAS)	DUP	Relative Percent Difference (RPD)
Sample Depth (ft bgs)	0-2	0-2	
Sample Date	4/06/2023	4/06/2023	
PAHs	Concentrations in mg/kg		%
Fluoranthene	0.061	0.045	30.19
Benzo(a)anthracene	0.034	0.026	26.67
Benzo(a)pyrene	0.034	0.03	12.50
Benzo(b)fluoranthene	0.046	0.036	24.39
Benzo(k)fluoranthene	0.012	0.0094	24.30
Chrysene	0.034	0.024	34.48
Benzo(ghi)perylene	0.02	0.018	10.00
Phenanthrene	0.036	0.019	61.82
Indeno(1,2,3-cd)pyrene	0.024	0.021	13.33
Pyrene	0.051	0.042	19.35
Metals	Concentrations in mg/kg		%
Arsenic	6.74	8.29	20.63
Barium	27.70	27.6	0.36
Chromium	13.30	15.7	16.55
Lead	10.30	12.6	20.09

Vapor Sample Duplicate Results			
Sample Location	SV101	DUP	Relative Percent Difference (RPD)
Sample Depth (ft bgs)	0-2	0-2	
Sample Date	4/06/2023	4/06/2023	
VOCs	Concentrations in mg/kg		%
Propylene	1.75	1.64	6.49
Dichlorodifluoromethane	0.466	0.446	4.39
Acetone	20.4	20.5	0.49
Trichlorofluoromethane	0.235	0.225	4.35
iso-propyl Alcohol	0.934	1	6.83
2-Butanone	1.59	1.44	9.90
n-Hexane	0.38	0.383	0.79
Benzene	0.218	0.226	3.60
Xylene	2.84	2.96	4.14
Heptane	0.693	0.716	3.26
4-Methyl-2-pentanone	0.641	0.64	0.16
Toluene	1.19	1.24	4.12
Tetrachloroethene	5.01	5.22	4.11
Ethylbenzene	0.454	0.495	8.64
p/m-Xylene	1.7	1.76	3.47
o-Xylene	1.14	1.19	4.39
4-Ethyltoluene	0.522	0.572	9.14
1,3,5-Trimethylbenzene	1.39	1.33	4.41
1,2,4-Trimethylbenzene	3.5	3.51	0.29
APH	Concentrations in mg/kg		%
Arsenic	6.74	8.29	20.63
Barium	27.70	27.6	0.36
Chromium	13.30	15.7	16.55
Lead	10.30	12.6	20.09

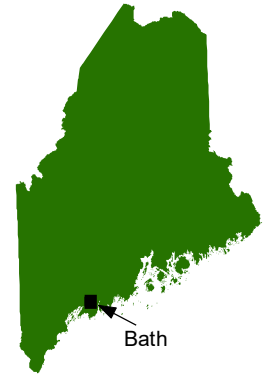
Drain Water Sample Duplicate Results			
Sample Location	D101	DDUP	Relative Percent Difference (RPD)
Sample Date	4/07/2023	4/07/2023	
EPH	Concentrations in ug/L	Concentrations in ug/L	
C9-C18 Aliphatics	3080	2580	17.67
C19-C36 Aliphatics	19900	13000	41.95
C11-C22 Aromatics	19000	16700	12.89

Notes:

mg/kg=milligram per kilogram; ug/L=microgram per liter

Values exceeding RPD of 50% for soil and 35% for soil vapor and groundwater are bolded

Regional Locator Map



SUBJECT PROPERTY



Notes

1. Data Source: The National Map
2. USGS Quad Names: Bath, ME
3. Latitude: 43°54'50.17"N
Longitude: 69°49'12.068"W

Scale and Orientation

0 1,000 2,000
1 inch = 2,000 feet



Prepared For

City of Bath
55 Front Street
Bath, Maine

Subject Property Address

Former Morse High School
1941 and 1968 Additions
826 High Street Bath, Maine

222.06056 May 2023

Figure 1
Subject Property
Location Map



Legend & Notes

- Subject Property
- Morse High School Property
- Parcel Boundary
- Sewer Manhole/ Storm Water Catch Basin Observed
- Pole-Mounted Transformer
- Pad-Mounted Transformer
- 8,000-Gallon Aboveground Storage Tank
- Approximate Location of Garage Drain
- Soil Vapor Sample

Notes

1. Some features are approximate in location and scale

2. This plan has been prepared for the City of Bath. All other uses are not authorized unless written permission is obtained from Ransom Consulting, LLC.

Scale & Orientation

0 30 60

1 inch = 60 feet

Prepared For

City of Bath
55 Front Street
Bath, Maine

Subject Property Address

Morse High School - 1968 Add.
826 High Street
Bath, Maine

222.06056 | May 2023

Figure 2
Subject Property
Conditions

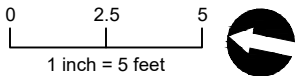
Legend & Notes

-  Approximate Location of Garage Drain
-  Sample Location

Notes:

- Some features are approximate in location and scale.
- This plan has been prepared for the City of Bath. All other uses are not authorized unless written permission is obtained from Ransom Consulting, LLC.

Scale and Orientation



Prepared For

City of Bath
55 Front Street
Bath, Maine

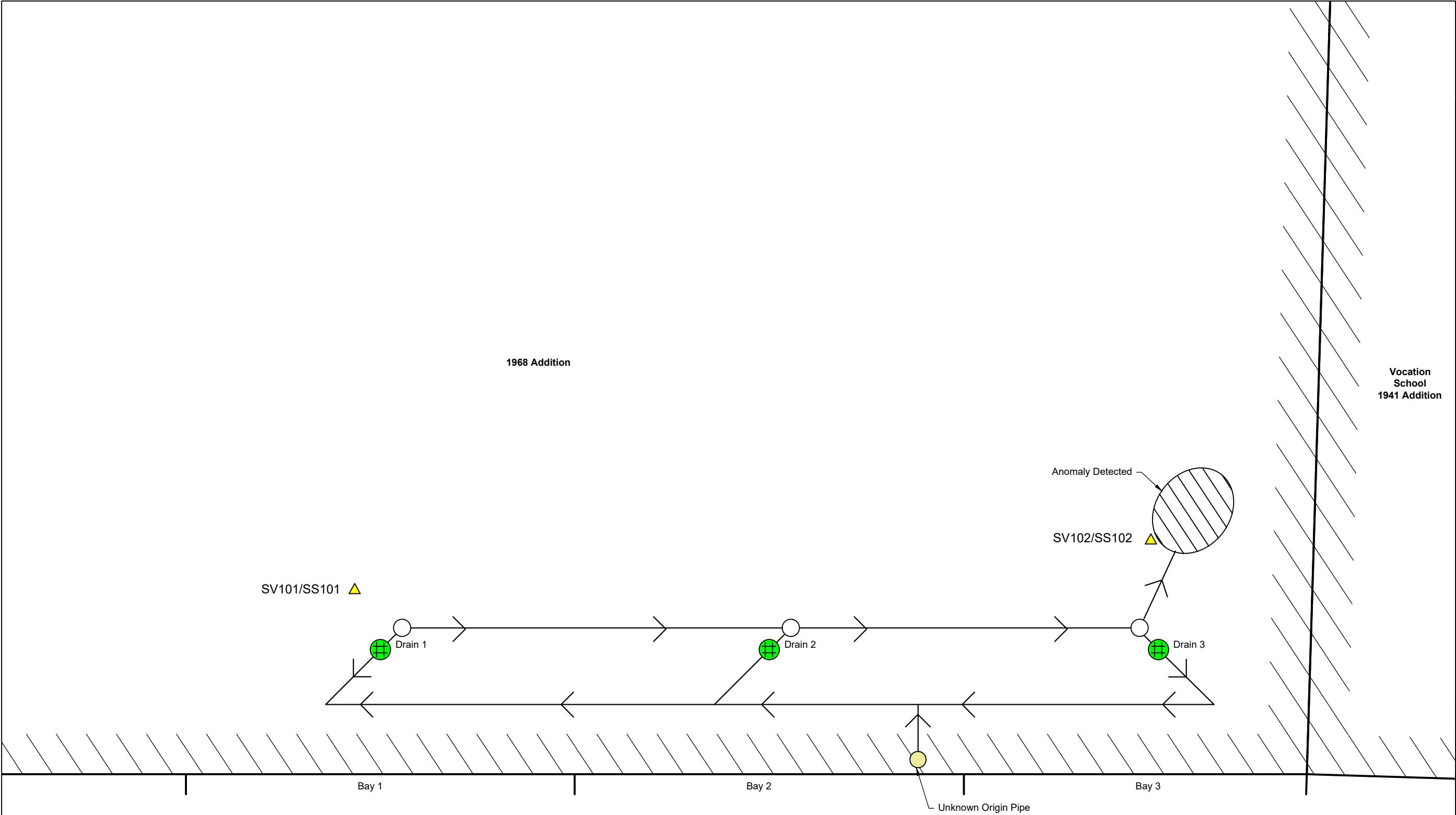
Site Address

Morse High School - 1968 Add.
826 High Street
Bath, Maine

222.06056

May 2023

Figure 3
GPR Survey Results



APPENDIX A

Soil Vapor Logs

Phase II ESA
1941 and 1968 Additions former Morse High School
826 High Street
Bath, Maine

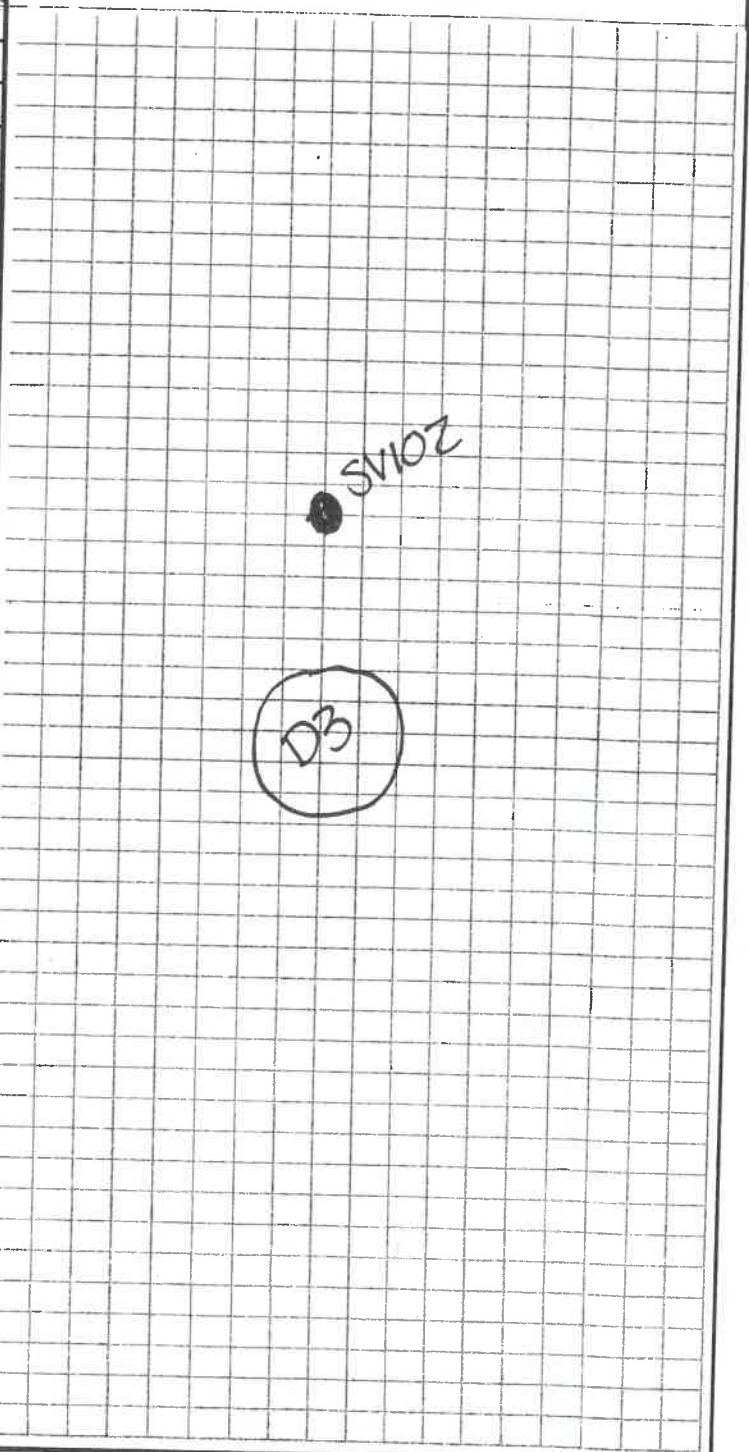
Morse
Phase II

222.06056

Soil Gas/Subslab Soil Gas Sampling Field Sheet

Site Name:	Morse High School
Town:	Bath
Date:	April 6 2023
Sample I.D.:	SV102
Sampling Purpose	(Source) (Utility) (Mitigation) (Receptor) (Other)
Sampling Personnel:	SPM
Project Manager	Dyer
Collection Device:	(Summa Can) (Tedlar Bag)
Sample Penetration Location:	(Asphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	± 5"6"
Depth to Water:	—
Suspected COCs:	(Petroleum) (Solvents)
Cannister I.D.:	2875
Flow Control I.D.:	02121
Flow control rate:	216
O ₂ Ambient	20.9%
CO ₂ Ambient	0 PPM
subsurface pressure/vacuum	(+/- inches of water column)
Pre-Sample O ₂	20.9% VOL
Pre-Sample CO ₂	4400
Pre-Sample PID:	3138 PPB
Pre-Sample CH ₄ :	0 (% Volume) (LEL, PPM)
Sample Initiation Time:	13:23
Initial Vacuum:	-29.48
Sample End Time:	13:35
Final Vacuum:	-2.95
Post Sample O ₂	20.9
Post Sample CO ₂ :	5550
Post Sample PID	1072 PPB

Sample Location Sketch



Notes/Observations: If subslab sample collected and no indoor air samples collect: note foundation type, slab type, floor penetrations, and wall penetrations. If subslab sample and indoor air sample collected, note co-located indoor air sample ID.

Morse phase II

Soil Gas/Subslab Soil Gas Sampling Field Sheet

222-06056

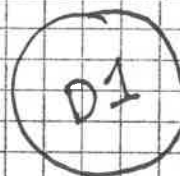
-5 and -3

Site Name:	Morse High School
Town:	Bath
Date:	April 6 2023
Sample I.D.:	SV101 / SWP SV DUP
Sampling Purpose	(Source) (Utility) (Mitigation) (Receptor) (Other)
Sampling Personnel:	SPM EPP
Project Manager	DYER
Collection Device:	(Summa Can) (Tedlar Bag)
Sample Penetration Location:	(Ashphalt) (Concrete) (Soil)
Soil Type:	(Fill) (Till) (Sand & Gravel) (Glacial Marine)
Sample Depth:	Subslab
Depth to Water:	
Suspected COCs:	(Petroleum) (Solvents)
Cannister I.D.:	174 / 3454
Flow Control I.D.:	41587 / 2021 2316
Flow control rate:	218 222
O ₂ Ambient	20.9 % Volume
CO ₂ Ambient	0 PPM
subsurface pressure/vacuum	(+/- inches of water column)
Pre-Sample O ₂	20.9 Vol %
Pre-Sample CO ₂	4450 PPM
Pre-Sample PID:	322 PPB
Pre-Sample CH ₄ :	0 (% Volume, %LEL, PPM)
Sample Initiation Time:	11:08
Initial Vacuum:	-29.17 / -28.72
Sample End Time:	11:24
Final Vacuum:	-0.81 / -1.08
Post Sample O ₂	20.9
Post Sample CO ₂ :	5850 ppm
Post Sample PID	70 ppb

Sample Location Sketch

174 = SV101
3454 = SV DUP

Row Door



Location
Sample

Notes/Observations: If subslab sample collected and no indoor air samples collect: note foundation type, slab type, floor penetrations, and wall penetrations. If subslab sample and indoor air sample collected, note co-located indoor air sample ID.

APPENDIX B

HMBI

Phase II ESA
1941 and 1968 Additions former Morse High School
826 High Street
Bath, Maine



400 Commercial Street, Suite 404
Portland, ME 04101
207.772.2891

May 26, 2023

Project 222.06056

Ms. Emily Ruger
Director of Community & Economic Development
City of Bath
55 Front Street
Bath, Maine

RE: Hazardous Building Materials Inventory
Former Morse High School – 1941 and 1968 Additions
826 High Street
Bath, Maine

Dear Emily:

On behalf of the City of Bath, Ransom Consulting, LLC (Ransom) has prepared this report presenting the results of the Hazardous Building Materials Inventory (HBMI) performed at the 1941 and 1968 additions to the former Morse High School (“Morse High School Additions”) located at 826 High Street in Bath, Maine. This work was completed by the City of Bath utilizing City of Bath’s Brownfields Revolving Loan Fund (RLF) program income. A Site Location Map is provided as Figure 1.

The work was authorized by the City of Bath, as part of environmental due diligence prior to potential redevelopment of the Site. This work was completed in accordance with Ransom’s Site-Specific Quality Assurance Project Plan (SSQAPP, Addendum No. 68, Rev. 0), dated March 29, 2023, which was provided to the United States Environmental Protection Agency (U.S. EPA) and Maine Department of Environmental Protection (MEDEP) prior to initiation of field sampling activities. The HBMI included sampling for asbestos-containing materials (ACM), sampling for polychlorinated biphenyls (PCBs) in building materials, and an evaluation of other hazardous and potentially hazardous building components.

EXECUTIVE SUMMARY

Given the age and construction of the former Morse High School additions (constructed in 1941 and 1968), there is potential for ACM and/or PCBs to be present in the building materials. Therefore, Ransom conducted this HBMI in April 2023 to identify hazardous materials, in advance of potential future redevelopment, which is anticipated to include demolition of the Morse High School additions. Based on the results of this inspection, Ransom draws the following conclusions:

1. ACM including vinyl floor tiles and mastics were identified at the Morse High School additions. Materials identified as ACM that may be impacted by future renovation or demolition activities should be properly removed for off-site disposal or otherwise abated, prior to such activities. Additional suspects or hidden materials that could not be observed may also be present.
2. PCBs were not detected above the U.S. EPA threshold value for “Unauthorized Use” PCB products of 50 milligrams per kilogram (mg/kg) in bulk material samples collected during this HBMI. Therefore, building materials at the Morse High School additions are not considered PCB bulk product waste.

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3. Universal Waste items, including fluorescent light tubes, fluorescent light ballasts, and emergency exit lights/signs identified at the Morse High School additions, are subject to hazardous and/or universal waste disposal requirements.

FACILITY DESCRIPTION

The former Morse High School building was constructed in multiple phases, beginning in 1935, with additions constructed in 1941, 1968, and 1995. The activities discussed herein were limited to the 1941 and 1968 building additions and did not include the remainder of the former Morse High School building. The 1941 addition is a slab on grade building comprised of three floors. The 1968 addition is a slab on grade building comprised of two floors. The 1968 addition includes one gymnasium and the vocational school with multiple classrooms, a woodworking shop and automotive garage. Both additions have exterior brick facades to mirror the original 1935 building.

A Site Layout plan showing the former Morse High School building and associated additions is attached as Figure 1. Generalized floor plans showing sample locations in the 1941 and 1968 additions are included as Figures 2, 3, and 4. Exterior sample locations are shown on the attached Figure 5. A photograph log documenting our key findings is included as Attachment A.

PREVIOUS ASSESSMENTS

Ransom reviewed historic Asbestos Hazard Emergency Response Act (AHERA) inspection reports provided by the City of Bath for the former Morse High School. These inspections were used to verify previously identified ACM and determine additional materials which would require sampling.

ASBESTOS-CONTAINING MATERIALS

Ransom conducted an inspection of the former Morse High School Additions for the presence of ACM on April 6, 7, and 11, 2023. The scope of the ACM inspection included the identification, quantification, and sampling of accessible suspect building materials on the interior and exterior portions of the former Morse High School Additions. The inspection was conducted by Eriksen Phenix and Wesley Harden of Ransom, who are certified by Maine and accredited by the U.S. EPA as asbestos inspectors. Copies of Wesley Harden's and Eriksen Phenix's most recent training certificates and state asbestos inspector certifications are provided as Attachment B.

Ransom collected 202 discrete samples from 61 suspect ACM identified on the interior and exterior of the former Morse High School Additions. Samples were analyzed by Optimum Analytical and Consulting, LLC (Optimum) of Salem, New Hampshire. Optimum is a Maine-licensed asbestos analytical laboratory and is also certified to perform bulk sample analysis by the National Voluntary Laboratory Accreditation Program (NVLAP). Copies of Optimum's relevant certifications are provided as Attachment B.

In the State of Maine, Occupational Safety and Health Administration (OSHA), the U.S. EPA, and the MEDEP are responsible for regulating the release of asbestos into the environment and protecting workers from exposure to airborne asbestos fibers. OSHA defines ACM as "any material containing more than one percent asbestos." MEDEP defines ACM as "any material containing asbestos in

quantities greater than or equal to one percent by volume as determined by weight, visual evaluation, and/or point count analysis.” Bulk samples of friable miscellaneous materials (e.g., pipe insulation, pressed fiber ceiling tile) were analyzed using the *Method for the Determination of Asbestos in Bulk Building Materials*, EPA/600/R-93/116 (1993) via polarized light microscopy (PLM) visual estimation. Non-friable organically bound (NOB) materials (e.g., floor tiles, roofing materials, mastics) were analyzed using PLM NOB–EPA 600/R-93/116 using the gravimetric reduction method (GRM).

The following is a brief discussion of the ACM identified during our survey:

1. **9”x9” floor tile, white (sample set 010) and associated black mastic (Sample set 011):** ACM 9”x9” floor tile and associated black mastic were identified under 12”x12” floor tiles in the shop restrooms.
2. **Floor tile mastic, tan/black (sample set 016):** ACM tan/black mastic was identified under non-ACM 12”x12” floor tiles in classrooms on the second floor of the 1968 addition.
3. **Floor tile mastic, black (sample set 025):** ACM black mastic was identified under non-ACM 12”x12” floor tiles in rooms between the automotive technology classroom and the building construction classroom.
4. **Floor tile mastic, black (sample set 032):** ACM black mastic was identified in connection with ACM 9”x9” floor tiles (sample sets 051, 052, 053, and 054) in the hallways and classrooms on the first and second floor of the 1968 addition.
5. **Green 9”x9” floor tile (sample set 049) and associated black mastic (Sample set 050):** ACM green 9”x9” floor tiles and associated black mastic were identified in the second-floor band room closets of the 1968 addition.

The following is a listing of materials were identified as presumed ACM (PACM) from the previous AHERA inspections for the Site:

1. **Ceiling tiles:** ACM ceiling tiles were previously identified in the girl’s locker room in the 1968 addition.
2. **Pipe fittings:** ACM pipe fittings were previously identified in the radio room, radio room hallway, boy’s locker room, and janitor’s closet in the 1968 addition.
3. **Pipe insulation:** ACM pipe insulation was previously identified in the welding shop, radio room, radio room hallway, boy’s locker room, and janitor’s closet in the 1968 addition.

The majority of the piping insulation throughout the former Morse High School Additions was observed to be fiberglass. “Hard-pack” insulation was observed on numerous small-diameter pipe fittings associated with the heating system, and large-diameter pipe fittings associated with the roof drain system. Sampling of this “hard pack” fitting insulation (sample sets 020 and 036) did not identify asbestos in connection with these fittings.

The MEDEP requires consultants to advise the building owner or owner's agent whenever the asbestos analytical laboratory has reported suspect ACM below ten percent asbestos. The owner or owner's agent may either elect to treat these materials as positive for asbestos or have the samples re-analyzed using an alternate method as listed below:

1. PLM EPA/600R-93/116 - Point Count (friable ACM); or
2. Transmission Electron Microscopy (TEM):
 - a. U.S. EPA NOB EPA/600/R-93/116b §2.5; or
 - b. TEM Chatfield Method.

Each of the ACM identified during Ransom's HBMI falls within this range. However, based on the nature of the analysis already conducted and the concentrations of asbestos fiber detected, re-analysis was not recommended for this investigation. A listing of all samples collected, analytical results, and estimated quantities of confirmed ACM can be found in Table 1. A copy of the laboratory analytical report can be found as Attachment C.

Asbestos fibers present potential health hazards when they become airborne. Federal regulations suggest that ACM may be managed in place, as long as it remains intact, undamaged, and in good condition. Current regulations require that asbestos-containing building materials be removed if they will be disturbed by demolition, renovation, or other building maintenance activities. ACM identified at the Site that will be impacted by proposed renovation or demolition will require removal, prior to the initiation of these activities. ACM abatement should be performed using approved methods in accordance with applicable federal and state regulations. ACM should be removed by a licensed asbestos abatement contractor and in accordance with a project design prepared by a certified asbestos abatement project designer, except where exempt from applicable rules.

Asbestos-containing asphalt-based roofing materials, exterior caulks, glazings, and sealants are exempt from MEDEP asbestos abatement regulations, provided that these materials are removed wholly intact and are not sawed, sanded, grinded, cut, or drilled during demolition or renovation. OSHA regulations still apply, and it is generally recommended that State of Maine-licensed asbestos abatement contractors conduct the removal of all ACM identified if it is to be impacted by renovation/demolition activities. Asbestos-containing waste generated from this project would be considered a "special waste" and require disposal in a landfill permitted to accept asbestos and/or an on-site consolidation area, if approved by the MEDEP.

PCBS IN BUILDING MATERIALS

PCBs may be present in building materials (most typically including caulks and paints) in buildings constructed or renovated between 1950 and 1978. Building materials with concentrations of PCBs greater than or equal to 50 mg/kg are considered an "Unauthorized Use" of PCBs under 40 Code of Federal Regulations *Part 761—Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions*, and are classified as "PCB Bulk Product Waste" when they enter the construction/demolition waste stream. The definition of PCB Bulk Product Waste also

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includes building materials that have been coated or serviced with PCBs. Masonry, wood, metals, and other building materials that are purposely coated with PCB-containing products are regulated as PCB Bulk Product Waste if the product coating the building materials contains PCBs at concentrations ≥ 50 mg/kg *and* the affected building materials are removed from use with the coating product adhered to the substrate.

To evaluate the potential presence of PCBs in building materials, Ransom collected six bulk samples (PCB-1 through PCB-6) of caulks and paints from the former Morse High School Additions for laboratory analysis. PCB sample locations are shown on Figures 2 and 5. Samples were placed in laboratory-supplied glassware, placed in a cooler with ice, and delivered under chain-of-custody to Alpha Analytical, Inc. (Alpha) of Westborough, Massachusetts for PCB analysis via U.S. EPA Method 8082A and using the Soxhlet extraction method, U.S. EPA Method 3540C.

Laboratory analytical results for total PCBs ranged from below the laboratory reporting limit to 7.34 milligrams per kilogram (mg/kg). These concentrations are below the Toxic Substances Control Act (TSCA) guidance of 50 mg/kg. Therefore, PCB bulk product waste was not identified in connection with the building materials at the former Morse High School Additions. Laboratory results from PCB testing are provided in Table 2 and a copy of the laboratory analytical data report is included as Attachment C.

OTHER HAZARDOUS AND POTENTIALLY HAZARDOUS MATERIALS

As part of our inspection, Ransom also conducted an assessment for other hazardous and potentially hazardous equipment and fixtures identified in the former Morse High School Additions that are typically classified, handled, and disposed as “universal” wastes. Specifically, Ransom’s survey included an inspection for the following universal wastes:

Polychlorinated Biphenyls

PCB-containing oil is sometimes found in compressor and hydraulic fluids, the dielectric fluid of older electrical transformers, and the capacitors associated with older fluorescent light ballasts. Although electrical equipment is currently required to be properly labeled indicating the presence or absence of PCBs, this has not always been the case. Ransom observed approximately 750 light ballasts within the former Morse High School Additions which have the potential for PCB-containing dielectric fluid. Electrical fixtures were not disassembled to inspect light ballasts for the presence of “No PCBs” labeling, due to electrical safety concerns.

With the power service off/disconnected by a licensed electrician, Ransom recommends that ballasts be inspected for “No PCBs” labeling prior to demolition or renovation activities that could impact them. Fluorescent light ballasts without the “No PCBs” labels are presumed to contain PCBs and should be managed as hazardous waste and recycled or disposed of in accordance with applicable federal and state regulations.

Mercury-Containing Components

Mercury-containing components such as fluorescent light tubes and high-intensity discharge (HID) lamps are classified as Universal Wastes and are regulated by the U.S. EPA under 40 CFR Parts 260–273.

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Ransom observed a total of approximately 1,580 fluorescent light tubes and HID lamps within the former Morse High School Additions that likely contain mercury.

Components presumed to contain mercury should be removed and recycled in accordance with Universal Waste regulations prior to proposed redevelopment activities that may impact them.

Heavy Metals

Emergency lighting systems/units are typically powered by batteries containing various heavy metals. Ransom observed approximately 40 emergency exit light/sign units within the former Morse High School Additions. Components presumed to contain heavy metals should be removed and recycled in accordance with Universal Waste regulations prior to proposed redevelopment activities that may impact them.

An inventory of other hazardous and potentially hazardous materials identified at the Site, typically managed as “universal” wastes, can be found in Table 3.

QUALITY ASSURANCE/QUALITY CONTROL

Bulk asbestos samples were analyzed by Optimum and bulk PCB samples were analyzed by Alpha. Both labs provided analysis and data according to standard operating protocols and laboratory data validation guidance included in Ransom’s SSQAPP for the Site. Each lab provided the following information in their analytical reports:

1. Data results sheets, including analytical results from duplicate samples;
2. Description of analytical methods and results; and
3. Other pertinent results/limits as deemed appropriate.

As outlined in the SSQAPP and/or our Generic QAPP, at the completion of the field tasks and receipt of the analytical results, a data usability analysis was conducted to document the precision, bias, accuracy, representativeness, comparability, and completeness of the results. The following sections present an analysis of Quality Assurance/Quality Control (QA/QC) protocols for sampling and testing conducted as part of Ransom’s HBMI.

Precision

Precision measures the reproducibility of measurements. The precision measurement is established using the relative percent difference (RPD) between the duplicate sample results. Duplicate samples of suspect ACM were submitted to the laboratory in accordance with Maine asbestos sampling requirements, which require minimum triplicate analysis of samples in order for a material to be deemed negative for asbestos. Bulk samples of 50 distinct suspect ACM were submitted for triplicate laboratory analysis, 39 of which tested negative for asbestos. Of the 39 sample sets testing negative for asbestos, each of the corresponding triplicate analyses were also consistently non-detect for asbestos. The precision of the sample results from asbestos testing is therefore deemed to be acceptable.

One duplicate sample (“PCB-DUP”) of suspect PCB containing material was collected and submitted for laboratory analysis along with the parent sample (“PCB-1”). Total PCBs were not detected in either the parent or duplicate samples; therefore, a RPD between the parent and duplicate samples could not be calculated.

Bias

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias assessments are made using personnel, equipment, and spiking materials or reference materials, as independent as possible from those used in the calibration of the measurement system. Bias assessments are typically based on the analysis of spiked samples so that the effect of the matrix on recovery is incorporated into the assessment. A documented spiking protocol and consistency in following that protocol are important to obtaining meaningful data quality estimates.

Matrix spike and matrix spike duplicate samples (MS/MSD) were used to assess bias in the PCB results, as prescribed in the specified methods. Acceptable recovery values were within the recoveries specified by each of the analysis methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods. No bias issues were identified by the laboratory in the PCB samples collected and analyzed during this assessment.

MS/MSD are not required protocols of U.S. EPA Method 600 and were not employed during laboratory analysis for asbestos. Therefore, no determination of laboratory bias was assessed for asbestos.

Accuracy

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systemic error. It therefore reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. For certain chemical analyses, surrogate compound recoveries are used to assess accuracy and method performance for each sample analyzed. Analysis of performance evaluation samples can provide additional information for assessing the accuracy of the analytical data being produced.

The lab provides a non-conformance summary that reports if the quality control criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for analysis were within acceptable limits. All quality control criteria for the PCB and lead samples were within acceptable limits.

Representativeness

Objectives for representativeness are defined for each sampling and analysis task and are a function of the investigative objectives. Representativeness was accomplished during this project through use of standard field, sampling, and analytical procedures. All objectives for sampling and analytical representativeness, as specified in SSQAPP, were met.

Comparability

Comparability is the confidence with which one data set can be compared to another data set. The objective for this QA/QC program is to produce data with the greatest possible degree of comparability. Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions and using standard and comprehensive reporting formats. Complete field documentation was used, including standardized data collection forms to support the assessment of comparability. Historical comparability shall be achieved through consistent use of methods and documentation procedures throughout the project.

Data Usability

Based on a review of the quality assurance/quality control measures, it appears that the data obtained during this investigation is of adequate quality for the purpose of making decisions regarding potential exposure risks and waste management.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this HBMI, Ransom makes the following conclusions and recommendations.

1. ACM including vinyl floor tiles and mastics were identified at the former Morse High School additions. Materials identified as ACM that may be impacted by future renovation or demolition activities should be properly removed for off-site disposal or otherwise abated, prior to such activities. Additional suspect or hidden materials that could not be observed may also be present.
2. PCBs were not detected above the U.S. EPA threshold value for “Unauthorized Use” PCB products of 50 milligrams per kilogram (mg/kg) in bulk material samples collected during this HBMI. Therefore, building materials at the Morse High School additions are not considered PCB bulk product waste.
3. Universal Waste items, including fluorescent light tubes, HID lamps, fluorescent light ballasts, and emergency exit lights/signs identified at the former Morse High School Additions, are subject to hazardous and/or universal waste disposal requirements.

LIMITATIONS

This HBMI is subject to certain limitations, which must be considered when interpreting the results. The information presented in this report is based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. Conclusions represent the professional judgment of Ransom, based on the data obtained from the work and the site conditions encountered at the time the work was performed and are not to be construed as legal advice. In addition to these general stipulations, additional site-specific limitations are as follows:

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City of Bath

1. Our survey was conducted utilizing limited destructive inspection and sampling techniques. No equipment was dismantled to access and inspect internal components. Limited additional suspect materials may be present in concealed or inaccessible spaces, including wall and ceiling cavities, subflooring layers, etc., which may be disturbed as part of future renovation or demolition.
2. The scope of our inspection was limited to observation of aboveground conditions, and may not identify subterranean materials such as foundation sealants, asbestos-cement utility piping, etc.
3. Our inspection was conducted on behalf of the City of Bath and is representative of the conditions observed at the time of this report. No reliance shall be made by other users, for additional purposes, or for future demolition/renovation projects at the site.

COST ESTIMATES

Based on the conditions observed during our investigation and industry standards in recent years, Ransom has provided estimates for the abatement of the identified ACM identified at the former Morse High School Additions. Please note that abatement cost estimates assume all identified ACM and universal wastes will be removed and properly disposed of off-site. If the building was assumed to remain in use (rather than be demolished), ACM and Universal Waste in active use may potentially be managed in place, and may not require removal, as long as they remain intact, undamaged, and in good condition. Line-item cost estimates for removal of asbestos-containing materials are provided in Table 4. Removal costs for Universal Wastes are provided in Table 5. Table 6 provides a summary of all estimated abatement costs for the project.

The cost estimates presented are not intended to be quotes for these services, but rather engineering cost estimates for project planning purposes. Ransom recommends that competitive contractor bids be solicited for proper abatement and/or disposal of the identified hazardous materials. Ransom also recommends that the cost estimate tables be removed and retained prior to providing copies of this report to contractors to obtain competitive bids for this work.

If you have any questions regarding the information in this report, please do not hesitate to contact any of the undersigned.

Sincerely,

RANSOM CONSULTING, LLC



Wesley Harden, L.G.
Hazardous Materials Specialist



Stephen J. Dyer, P.E.
Principal/Program Manager



Eriksen Phenix, L.G.
Project Manager



TABLE 1: Summary of Asbestos Laboratory Testing Results
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Material	Location	Sample Number	Asbestos Quantity and Type ^[2,4]	Estimated Quantity ^[3]
Caulk, light gray	Exterior vinyl frame windows and panels, 1968 addition	001A through 001C	NAD	
Caulk, dark gray	Exterior aluminum frame windows and security doors	002A through 002C	NAD	
Caulk, brown	Exterior window insulation board openings, 1968 addition	003A through 003C	NAD	
Caulk, white	Exterior vinyl frame windows, 1941 addition	004A through 004C	NAD	
Foam board insulation coating, gray	Exterior window insulation board openings, 1968 addition	005A through 005C	NAD	
12"x12" floor tile, dark blue	Shop, second floor, third floor 1968 addition	006A through 006C	NAD	
12"x12" floor tile mastic, tan	Shop, second floor, third floor 1968 addition	007A through 007C	NAD	
12"x12" floor tile, tan	Shop restrooms	008A through 008C	NAD	
12"x12" floor tile mastic, tan	Shop restrooms	009A through 009C	NAD	
9"x9" floor tile, white	Shop restrooms	010A	5.16% Chrysotile	525 SF
		010B and 010C	NA/PS	
Floor tile mastic, black	Shop restrooms	011A	8.98% Chrysotile	525 SF
		011B and 011C	NA/PS	
Fibrous insulation board backing	Boy's locker room	012A through 012C	NAD	
12"x12" floor tile, #2 blue	First and second floor, 1968 addition	013A through 013C	NAD	
12"x12" floor tile, #3 blue	First and second floor, 1968 addition	014A through 014C	NAD	
12"x12" floor tile, white	First and second floor classrooms, 1968 addition	015A through 015C	NAD	
Mastic, tan/black under 12"x12" floor tiles	Rooms 124, 125, 126, 127, 129, 131, and 122 - 1968 addition	016A	2.36% Chrysotile	7,500 SF
		016B and 016C	NA/PS	
12"x12" floor tile, white/blue	Second floor hallway, room 123 1968 addition	017A through 017C	NAD	
Mastic, tan associated with 017ABC	Second floor hallway, room 123 1968 addition	018A through 018C	NAD	
12"x12" floor tile, #4 blue	Second floor, third floor	019A through 019C	NAD	
Small diameter fitting insulation, gray	Throughout 1968 addition	020A through 020C	NAD	
Plaster, rough coat	Throughout 1968 addition	021A through 021G	NAD	
Plaster, skim coat	Throughout 1968 addition	022A through 022G	NAD	
Drywall	Throughout 1968 addition	023A through 023C	NAD	
Joint compound	Throughout 1968 addition	024A through 024C	NAD	
Mastic, black	Classroom adjacent to construction shop	025A	2% Chrysotile	375 SF
		025B and 025C	NA/PS	
2'x2' ceiling tiles	Library, career center, alumni room, Room 13, throughout first floor 1968 addition	026A through 026C	NAD	
1'x1' ceiling tiles	Above 2'x2' ceiling tiles in Room 13 and alumni room 1968 addition	027A through 027C	NAD	
2'x4' ceiling tile, long lines	Throughout first floor 1968 addition	028A through 028C	NAD	
2'x4' ceiling tile, type 2	Throughout first floor 1968 addition	029A through 029C	NAD	
2'x4' ceiling tile, type 3	Throughout first floor 1968 addition	030A through 030C	NAD	
White wall pannel mastic	First floor administration office	031A through 031C	NAD	
Mastic, black	Associated with 9"x9" floor tiles throughout 1968 addition hallways and rooms 133, 135, 136, 136B, 137, 138, 139, 140, 142, 146, 147, 149, Teacher's Room	032A	4.53% Chrysotile	19,700
		032B and 032C	NA/PS	
White floor leveling compound	First floor hallways 1968 addition	033A through 033C	NAD	
Brown floor underlayment	Girls Gym	034A through 034C	NAD	
Yellow carpet mastic	Library and career center	035A through 035C	NAD	
Large diameter pipe fittings insulation	Throughout 1968 addition	036A theough 036C	NAD	
12"x12" floor tile, red	Library	037A through 037C	NAD	
12"x12" floor tile, gray/white fleck	Library	038A through 038C	NAD	
Mastic, yellow associated with 037ABC and 038ABC	Library	039A through 039C	NAD	
12"x12" acoustic panel	Band Room	040A through 040C	NAD	
Jute backed linoleum	1941 hallways and classrooms, third layer	041A through 041C	NAD	
Pebble pattern floor tile, tank	1941 hallways and classrooms, second layer	042A through 042C	NAD	
12"x12" ceiling tile, white	1941 hallway	043A through 043C	NAD	
Glue daubs, brown assocaited with 043ABC	1941 hallway	044A through 044C	NAD	
Plaster, skim coat	Throughout 1941 building	045A through 045G	NAD	

TABLE 1: Summary of Asbestos Laboratory Testing Results
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Material	Location	Sample Number	Asbestos Quantity and Type ^[2,4]	Estimated Quantity ^[3]
Plaster, rough coat	Throughout 1941 building	046A through 046G	NAD	
12"x12" wall tile, white	Band room closets, second floor	047A through 047C	NAD	
Glue daubs, brown associated with 047ABC	Second floor band room closets - 1968 addition	048A through 048C	NAD	
9"x9" floor tile, green	Second floor band room closets - 1968 addition	049A	3.48% Chrysotile	300 SF
		049B and 049C	NA/PS	
Mastic, black associated with sample set 049	Second floor band room closets - 1968 addition	050A	6.9% Chrysotile	300 SF
		050B and 050C	NA/PS	
9"x9" floor tile, brown	First and second floor hallways - 1968 addition	051A	5.05% Chrysotile	3,800
		051B and 051C	NA/PS	
9"x9" floor tile, gray with white fleck	Second floor, rooms 142, 146, 147, teacher's room - 1968 addition	052A	3.74% Chrysotile	7,200
		052B and 052C	NA/PS	
9"x9" floor tile, red	Second floor, rooms 148 and 149 - 1968 addition	053A	2.86% Chrysotile	4,800
		053B and 053C	NA/PS	
9"x9" floor tile, white	Second floor, rooms 135, 136, 136B 137, 138, 140, 133 - 1968 addition	054A	2.36% Chrysotile	4,400
		054B and 054C	NA/PS	
Rubber roof membrane, black	1968 roof	055A through 055C	NAD	
Foam board, yellow	1968 roof	056A through 056D	NAD	
Paper backing on foam board	1968 roof	057A through 057C	NAD	
Rubber roof membrane, black	1941 roof	058A and 058B	NAD	
Pressed fiber board, brown	1941 roof	059A through 059C	NAD	
Foam board, yellow	1941 roof	060A through 060C	NAD	
Paper backing on foam board	1941 roof	061A through 061C	NAD	
PRESUMED ACM FROM PREVIOUS AHERA SURVEYS				
Ceiling tiles	Girls locker room	N/A	PACM	740 SF
Fittings	Radio room, hall connecting new to old building, boy's locker room	N/A	PACM	25 EA
TSI pipe insulation	Boy's locker room, janitor's closet, welding	N/A	PACM	130 LF

NOTES:

- 1. Samples were collected on April 6, 7, and 11 by Ransom Consulting, LLC., and were analyzed by Optimum Analytical and Consulting, LLC of Salem, NH.
- 2. NA/PS = not analyzed/positive stop. Sample sets are analyzed until asbestos is identified in an amount greater than one percent.
- 3. SF = Square Feet. LF = Linear Feet. EA = Each. NA = Not Applicable.
- 4. NAD = No asbestos detected; NS = No Sample; PACM = Presumed Asbestos Containing Material.
- 5. Samples shown in bold are regulated ACM under MEDEP and U.S. EPA asbestos rules.

TABLE 2: PCBs in Building Materials Results
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Sample Identification	Sample Description	Location	Sample Matrix	Total PCBs (mg/kg)
PCB-1	Light gray caulk	Exterior vinyl frame windows and pannels, 1968 addition	Caulk	BRL (0.330)
PCB-2	Dark gray caulk	Exterior aluminium frame security doors	Caulk	BRL (0.309)
PCB-3	Brown caulk	Exterior insulation board window openings	Caulk	BRL (0.281)
PCB-4	White caulk	Exterior vinyl frame windows 1941 addition	Caulk	BRL (0.315)
PCB-5	Gray floor paint	Auto shop floors	Paint	6.36
PCB-6	Red floor paint	Boy's locker room	Paint	7.34

NOTES:

1. Samples were collected on April 6, 2023 by Ransom Consulting, LLC and were analyzed by Alpha Analytical of Westborough, Massachusetts.
2. BRL () = below reporting limit indicated in parentheses.
3. Values in **bold print** indicate Unauthorized Use PCB products ≥ 50 mg/kg (none identified)

TABLE 3: Inventory of Other Hazardous/Potentially Hazardous Materials
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Component	Hazard	Location	Quantity
Fluorescent light ballasts	PCBs	Throughout	750
Fluorescent light tubes (including CFLs)	Mercury	Throughout	1580
Emergency exit lights/signs	Heavy metals	Throughout	40

TABLE 4: Removal and Disposal Cost Estimates for Asbestos-Containing Materials
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Material	Location	Quantity	Unit¹	Unit Cost	Total
9"x9" floor tile and mastic	Shop restrooms	525	SF	\$8	\$4,200
Tan/black mastic under 12"x12" floor tiles	Rooms 124, 125, 126, 127, 129, 131, and 122 - 1968 addition	7,500	SF	\$4	\$30,000
Black mastic under 12"x12" floor tiles	Classroom adjacent to construction shop	375	SF	\$4	\$1,500
Green 9"x9" floor tile and mastic	Band room closets	300	SF	\$6	\$1,800
Brown 9"x9" floor tile and mastic	1968 addition hallways	3,800	SF	\$6	\$22,800
Gray 9"x9" floor tile and mastic	Rooms 142, 146, 147, and teacher's room - 1968 addition	7,200	SF	\$6	\$43,200
Red 9"x9" floor tile and mastic	Rooms 148 and 149 - 1968 addition	4,800	SF	\$6	\$28,800
White 9"x9" floor tile and mastic	Rooms 135, 136, 136B, 137, 138, 140, and 133 - 1968 addition	4,400	SF	\$6	\$26,400
Confirmed Asbestos Abatement Subtotal:					\$158,700
<i>TSI Pipe insulation</i>	<i>Boy's locker room, janitor closet, welding</i>	<i>130</i>	<i>LF</i>	<i>\$35</i>	<i>\$4,550</i>
<i>Ceiling tiles</i>	<i>Girls locker room</i>	<i>740</i>	<i>SF</i>	<i>\$4</i>	<i>\$2,960</i>
<i>TSI Fittings</i>	<i>Radio room, hall connecting new to old building, boy's locker room</i>	<i>25</i>	<i>EA</i>	<i>\$40</i>	<i>\$1,000</i>
PACM Abatement Subtotal:					\$8,510
Contingency³:					\$25,082
TOTAL ESTIMATED ASBESTOS ABATEMENT COST:					\$192,292

NOTES:

Italicized items are PACM

1. SF = Square Feet; LF = Linear Feet; EA = Each; LS = Lump Sum

2. A 15% contingency is added to cover potential hidden costs and market variability.

3. The costs presented do not include project monitoring, oversight, or closure reporting by a project consultant or engineer.

It is assumed that project design and air clearance testing would be included in bids for abatement work; any RFB should be structured accordingly.

TABLE 5: Removal and Disposal/Recycling Cost Estimates for other Hazardous/Potentially Hazardous Materials
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Material	Quantity	Units	Unit Cost	Total
Fluorescent light ballasts	750	EA	\$12	\$9,000
Fluorescent light tubes (including HID's and CFLs)	1580	EA	\$4	\$6,320
Emergency exit lights/signs	40	EA	\$35	\$1,400
<i>Total removal and disposal/recycling cost Subtotal:</i>				\$16,720
<i>Contingency³:</i>				\$2,508
TOTAL OTHER HAZARDOUS/POTENTIALLY HAZARDOUS MATERIALS:				\$19,228

NOTES:

1. Cost estimates assume all units will be disposed/recycled. A cost savings may be achieved if some items are to be salvaged or re-used
2. HID units were located high overhead and not accessible for inspection.
3. A 15% contingency is added to cover potential hidden costs and market variability.

TABLE 6: Total Removal and Disposal/Recycling Cost Estimate
Hazardous Building Materials Inventory
Morse High School - 1941 and 1968 additions
826 High Street, Bath, Maine

Materials	Estimated Removal Costs
Confirmed asbestos-containing materials	\$192,292
Other hazardous materials	\$19,228
TOTAL:	\$211,520

NOTES:

Please see additional notes included in Cost Estimate Tables 4 and 5.

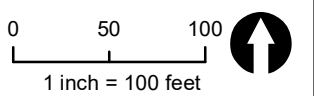


Legend & Notes

-  Subject Property
-  Morse High School Property
-  Parcel Boundary

- Notes
- Some features are approximate in location and scale
 - This plan has been prepared for the City of Bath. All other uses are not authorized unless written permission is obtained from Ransom Consulting, LLC.

Scale & Orientation



Prepared For

City of Bath
55 Front Street
Bath, Maine

Subject Property Address

Morse High School - 1941 & 1968 Additions
826 High Street, Bath, Maine

222.06056 | May 2023

Figure 1
Site Layout

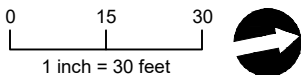
Legend & Notes

- ▲ Sample Testing Negative for Asbestos
- ▲ Sample Testing Positive for Asbestos
- PCB Sample Location

Notes:

1. Site plan based on measurements and observations based on "Ahera Implementation in Public Schools" by Balsam Environmental Consultants dated 10/31/88
2. Some features are approximate in location and scale.
3. This plan has been prepared for City of Bath. All other uses are not authorized unless written permission is obtained from Ransom Consulting, LLC.

Scale and Orientation



Prepared For

City of Bath
55 Front Street
Bath, Maine

Site Address

Morse High School - 1941 and
1968 Additions
826 High Street
Bath, Maine

222.06056 | May 2023

Figure 2
First Floor



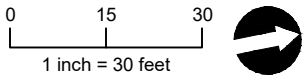
Legend & Notes

▲ Sample Testing
Negative for Asbestos

Notes:

1. Site plan based on measurements and observations based on "Ahera Implementation in Public Schools" by Balsam Environmental Consultants dated 10/31/88
2. Some features are approximate in location and scale.
3. This plan has been prepared for City of Bath. All other uses are not authorized unless written permission is obtained from Ransom Consulting, LLC.

Scale and Orientation



Prepared For

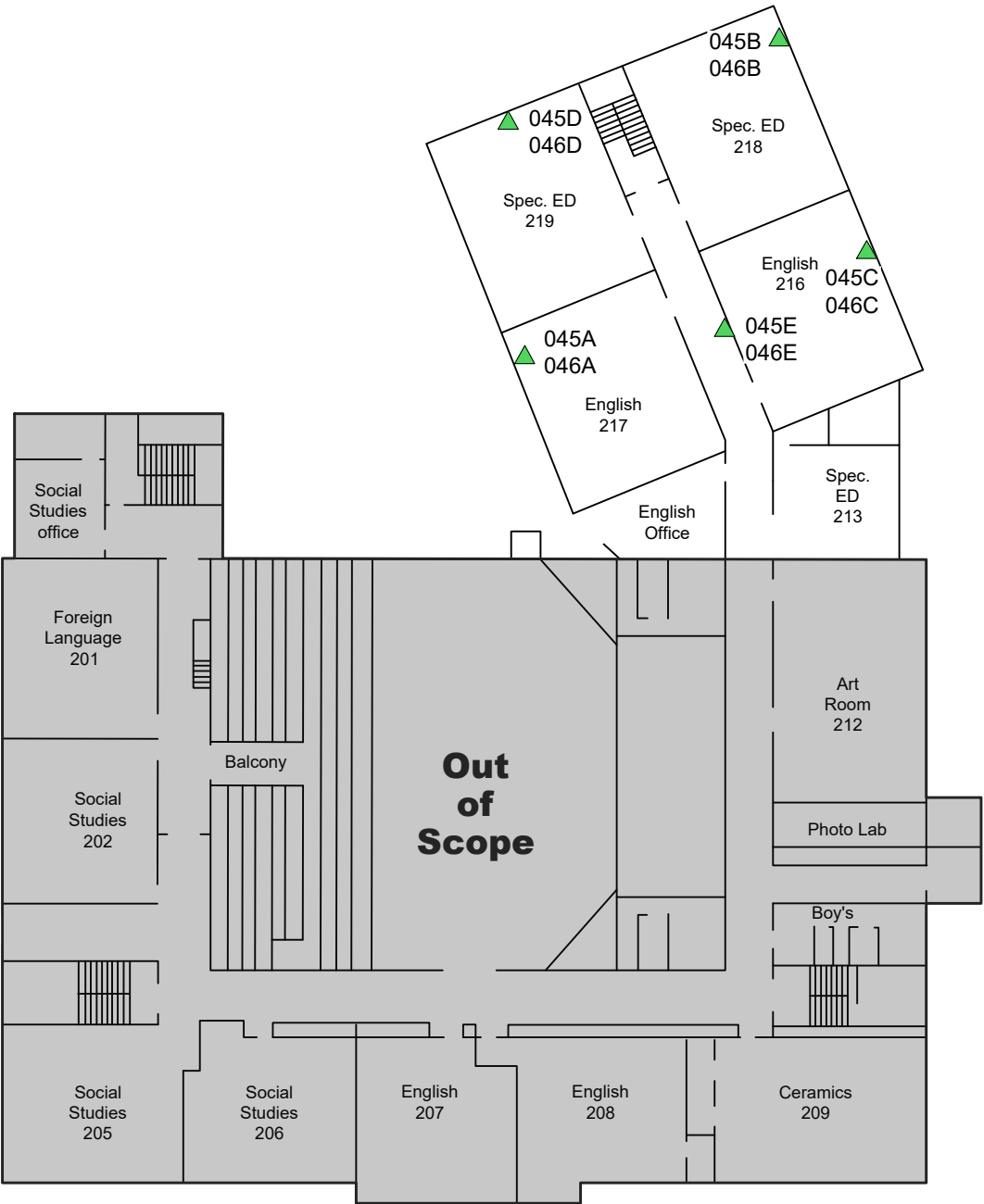
City of Bath
55 Front Street
Bath, Maine

Site Address

Morse High School - 1941 and
1968 Additions
826 High Street
Bath, Maine

222.06056 | May 2023

Figure 4
Third Floor





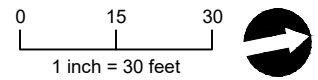
Legend & Notes

- Sample Testing Negative for Asbestos
- PCB Sample Location

Notes:

1. Site plan based on measurements and observations based on "Ahera Implementation in Public Schools" by Balsam Environmental Consultants dated 10/31/88
2. Some features are approximate in location and scale.
3. This plan has been prepared for City of Bath. All other uses are not authorized unless written permission is obtained from Ransom Consulting, LLC.

Scale and Orientation



Prepared For

City of Bath
55 Front Street
Bath, Maine

Site Address

Morse High School - 1941 and
1968 Additions
826 High Street
Bath, Maine

222.06056 | May 2023

Figure 5
Exterior

ATTACHMENT A

Photograph Log

Hazardous Building Materials Inventory
Morse High School – 1941 and 1968 Additions
826 High Street
Bath, Maine

Photograph Log



Photo 1 (April 6, 2023): Non-ACM 12"x12" floor tile and mastic (sample sets 008 and 009) over ACM 9"x9" floor tile (sample set 010) and associated mastic (sample set 011) located in the shop restroom.



Photo 2 (April 7, 2023): ACM tan/black mastic (sample set 016ABC) beneath non-ACM 12"x12" floor tiles on the first and second floors of the 1968 addition.



Photo 3 (April 11, 2023): ACM 9"x9" floor tile (sample set 049) and associated mastic (sample set 050) located in the second-floor band room closets in the 1968 addition.

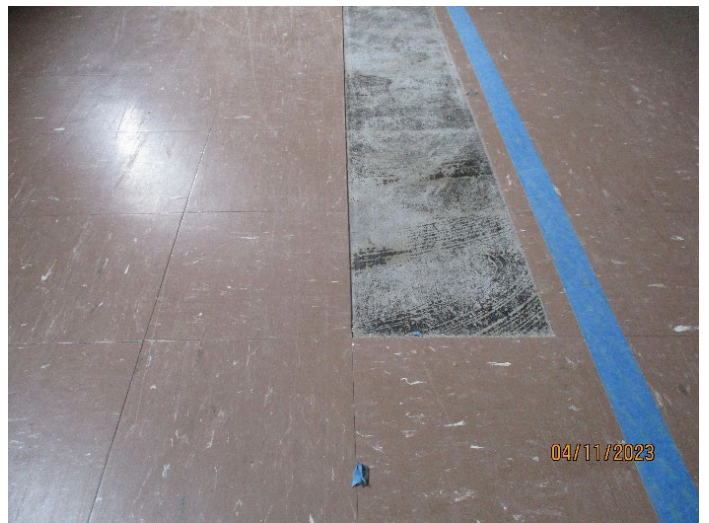


Photo 4 (April 11, 2023): ACM residual mastic (sample set 032) and ACM 9"x9" brown floor tiles (sample set 051) located in the first and second floor hallways of the 1968 addition.



Photo 5 (April 11, 2023): ACM 9"x9" floor tiles (sample set 052) located on the second floor of the 1968 addition.



Photo 6 (April 11, 2023): ACM 9"x9" red floor tiles (sample set 053) located on the first floor of the 1968 addition.

Photograph Log



Photo 1 (April 6, 2023): PACM ceiling tiles located in the girl's locker room of the 1968 addition.



Photo 2 (April 7, 2023): PACM pipe insulation and fitting identified in the janitor's closet on the first floor of the 1968 addition.

ATTACHMENT B

Certifications

Hazardous Building Materials Inventory
Morse High School – 1941 and 1968 Additions
826 High Street
Bath, Maine



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MELANIE LOYZIM
COMMISSIONER

February 12, 2023

Ransom Consulting, LLC
400 Commercial Street, Suite 404
Portland, Maine 04101



Dear Licensee:

Asbestos application(s) for individual certification of the **one** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. **Please attach 1 updated passport size photo with every application.**

Remember, in Maine all **certified employees** working on an asbestos abatement project, whether conducting removal/repair, air monitoring, design, inspection, or analysis functions, **must work for a State of Maine licensed asbestos firm** and carry his/her wallet card(s) on the job site.

As a reminder, prior to renewing your asbestos certification, the State of Maine **requires** an annual refresher course to be taken before submitting a renewal application. A certificate shall expire one year from the last day of the month from the date of issuance, **or on the last day of the month that the training certificate expires**, whichever is sooner.

All our asbestos forms can be found at <https://www.maine.gov/dep/waste/asbestos/forms.html>
Thank you for your cooperation and your completed application(s).

<u>Name</u>	<u>Category</u>	<u>Certification #</u>	<u>Exp. Date</u>
Wesley E. Harden	Inspector	AI-0874	01/31/2024

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MELANIE LOYZIM
COMMISSIONER

July 19, 2022

Ransom Consulting, LLC
400 Commercial Street, Suite 404
Portland, Maine 04101



Dear Licensee:

Asbestos application(s) for individual certification of the **one** employee(s) listed below have been received and **approved**. Individual certification numbers are listed below and wallet card(s) are enclosed. Card(s) are property of the individual to whom each is issued. Your responsibility as a licensee is to ensure delivery of the cards to persons in your employment. This letter should be retained for your company files as record of certification. **Please attach 1 updated passport size photo with every application.**

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As a reminder, prior to renewing your asbestos certification, the State of Maine **requires** an annual refresher course to be taken before submitting a renewal application. A certificate shall expire one year from the last day of the month from the date of issuance, **or on the last day of the month that the training certificate expires**, whichever is sooner.

All our asbestos forms can be found at <https://www.maine.gov/dep/waste/asbestos/forms.html>
Thank you for your cooperation and your completed application(s).

<u>Name</u>	<u>Category</u>	<u>Certification #</u>	<u>Exp. Date</u>
Eriksen P. Phenix	Inspector	AI-0560	06/30/2023

Sincerely,

Sandra J. Moody, Environmental Specialist
Division of Remediation
Bureau of Remediation and Waste Management

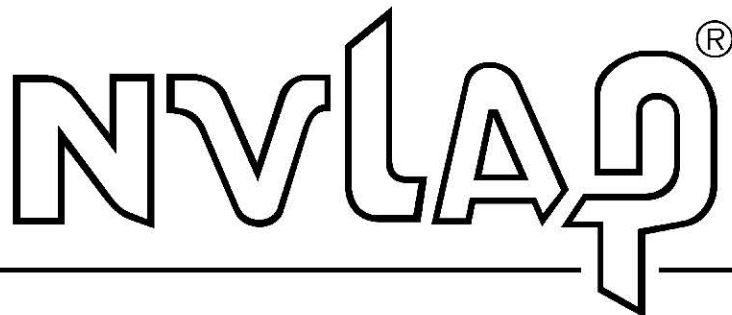
AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101433-0

Optimum Analytical & Consulting LLC
Salem, NH

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2022-04-01 through 2023-03-31

Effective Dates



A handwritten signature in blue ink, reading "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program



State of Maine
Department of Environmental Protection

LICENSE

Optimum Analytical & Consulting, LLC

Asbestos Analytical Laboratory
(Bulk)

License Number: LB-0067

Expiration Date: 03/31/2023



State of Maine
Department of Environmental Protection

LICENSE

Optimum Analytical & Consulting, LLC

Asbestos Analytical Laboratory
(Air)

License Number: LA-0065

Expiration Date: 03/31/2023

ATTACHMENT C

Laboratory Reports

Hazardous Building Materials Inventory Morse
High School – 1941 and 1968 Additions
826 High Street
Bath, Maine



Erik Phenix
Ransom Environmental Consultants, Inc.
400 Commercial Street
Portland ME 04101

Project Reference: 222.06056.201
Laboratory Batch #: 2346735
Date Samples Received: 04/13/2023
Date Samples Analyzed: 04/27/2023
Date of Final Report: 05/05/2023

SAMPLE IDENTIFICATION:

Two Hundred Two (202) samples from Morse High School, Bath, Maine project were submitted by Client on 04/13/2023

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter ($<0.25\mu\text{m}$) may not be detected by the PLM method. Floor tile and other resinous bound materials may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additionally, there is currently no approved EPA analytical method to reliably confirm vermiculite as non-asbestos containing. Additional analytical methods may be required. Optimum Analytical recommends using Transmission Electron Microscopy (TEM) or other approved methods for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

The client/laboratory shall not use the NVLAP and AIHA Logo or this test report in a way that constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit $<1\%$, Reporting Limits: CVES = 1% , 400 Point Count = $.25\%$, 1000 Point Count = 0.1% ; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc.
ADDRESS: 400 Commercial Street
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2346735
PROJECT #: 222.06056.201
DATE COLLECTED: 04/07/2023
COLLECTED BY: Client
DATE RECEIVED: 04/13/2023
ANALYSIS DATE: 04/27/2023
REPORT DATE: 05/05/2023
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-001 001A	Exterior vinyl frame windows and panels, 1968 addition Caulk, Light Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-002 001B	Exterior vinyl frame windows and panels, 1968 addition Caulk, Light Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-003 001C	Exterior vinyl frame windows and panels, 1968 addition Caulk, Light Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-004 002A	Exterior aluminum fram windows and security doors Caulk, Dark Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-005 002B	Exterior aluminum fram windows and security doors Caulk, Dark Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-006 002C	Exterior aluminum fram windows and security doors Caulk, Dark Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-007 003A	Exterior window insulation board openings Caulk, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-008 003B	Exterior window insulation board openings Caulk, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc.
ADDRESS: 400 Commercial Street
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2346735
PROJECT #: 222.06056.201
DATE COLLECTED: 04/07/2023
COLLECTED BY: Client
DATE RECEIVED: 04/13/2023
ANALYSIS DATE: 04/27/2023
REPORT DATE: 05/05/2023
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-009 003C	Exterior window insulation board openings Caulk, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-010 004A	Exterior vinyl frame windows 1941 addition Caulk, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-011 004B	Exterior vinyl frame windows 1941 addition Caulk, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-012 004C	Exterior vinyl frame windows 1941 addition Caulk, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-013 005A	Exterior window insulation board openings Foam Board Insulation Coating, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 1% 8% 91%
2346735-014 005B	Exterior window insulation board openings Foam Board Insulation Coating, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 1% 8% 91%
2346735-015 005C	Exterior window insulation board openings Foam Board Insulation Coating, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 1% 8% 91%
2346735-016 006A	Shop, second floor, third floor 12"x12" Floor Tile, Dark Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc.
ADDRESS: 400 Commercial Street
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2346735
PROJECT #: 222.06056.201
DATE COLLECTED: 04/07/2023
COLLECTED BY: Client
DATE RECEIVED: 04/13/2023
ANALYSIS DATE: 04/27/2023
REPORT DATE: 05/05/2023
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-017 006B	Shop, second floor, third floor 12"x12" Floor Tile, Dark Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-018 006C	Shop, second floor, third floor 12"x12" Floor Tile, Dark Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-019 007A	Shop, second floor, third floor 12"x12" Floor Tile Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-020 007B	Shop, second floor, third floor 12"x12" Floor Tile Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-021 007C	Shop, second floor, third floor 12"x12" Floor Tile Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-022 008A	Shop restrooms 12"x12" Floor Tile, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-023 008B	Shop restrooms 12"x12" Floor Tile, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-024 008C	Shop restrooms 12"x12" Floor Tile, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-025 009A	Shop restrooms Mastic, Tan Note: Insufficient amount of Mastic for Gravimetric Reduction.	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-026 009B	Shop restrooms Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc.
ADDRESS: 400 Commercial Street
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2346735
PROJECT #: 222.06056.201
DATE COLLECTED: 04/07/2023
COLLECTED BY: Client
DATE RECEIVED: 04/13/2023
ANALYSIS DATE: 04/27/2023
REPORT DATE: 05/05/2023
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-027 009C	Shop restrooms Mastic, Tan	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-028 010A	Throughout 9"x9" Floor Tile, White	LAYER 1 100%	Chrysotile	5.16%	Cellulose Fiber Binder/Filler	1% 93.84%
2346735-029 010B	Throughout 9"x9" Floor Tile, White Note: Positive Stop	LAYER 1 100%				
2346735-030 010C	Throughout 9"x9" Floor Tile, White Note: Positive Stop	LAYER 1 100%				
2346735-031 011A	Throughout Mastic, Black	LAYER 1 100%	Chrysotile	8.98%	Cellulose Fiber Binder/Filler	2% 89.02%
2346735-032 011B	Throughout Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-033 011C	Throughout Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-034 012A	Boys locker room Fibrous Insulation Board Backing, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	90% 10%
2346735-035 012B	Boys locker room Fibrous Insulation Board Backing, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	90% 10%
2346735-036 012C	Boys locker room Fibrous Insulation Board Backing, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	90% 10%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc.
ADDRESS: 400 Commercial Street
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2346735
PROJECT #: 222.06056.201
DATE COLLECTED: 04/07/2023
COLLECTED BY: Client
DATE RECEIVED: 04/13/2023
ANALYSIS DATE: 04/27/2023
REPORT DATE: 05/05/2023
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-037 013A	Second floor, third floor #2 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-038 013B	Second floor, third floor #2 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-039 013C	Second floor, third floor #2 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-040 014A	Second floor, third floor #3 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-041 014B	Second floor, third floor #3 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-042 014C	Second floor, third floor #3 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-043 015A	Second and third floor classrooms 12"x12" Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-044 015B	Second and third floor classrooms 12"x12" Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-045 015C	Second and third floor classrooms 12"x12" Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-046 016A	Second and third floor classrooms Mastic, Tan/Black	LAYER 1 100%	Chrysotile	2.36%	Cellulose Fiber Binder/Filler	1% 96.64%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-047 016B	Second and third floor classrooms Mastic, Tan/Black Note: Positive Stop	LAYER 1 100%		
2346735-048 016C	Second and third floor classrooms Mastic, Tan/Black Note: Positive Stop	LAYER 1 100%		
2346735-049 017A	Second floor hallway, room 123 12x12 Floor Tile, White/Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-050 017B	Second floor hallway, room 123 12x12 Floor Tile, White/Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-051 017C	Second floor hallway, room 123 12x12 Floor Tile, White/Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-052 018A	Second floor hallway, room 123 Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-053 018B	Second floor hallway, room 123 Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-054 018C	Second floor hallway, room 123 Mastic, Tan Note: Insufficient amount of Mastic for Gravimetric Reduction.	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-055 019A	Second floor, third floor #4 Blue 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-056 019B	Second floor, third floor #4 Blue 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-057 019C	Second floor, third floor #4 Blue 12"x12" Floor Tile, Blue	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-058 020A	throughout Small Diameter Fitting Insulation, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 3% 15% 82%
2346735-059 020B	throughout Small Diameter Fitting Insulation, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 3% 15% 82%
2346735-060 020C	throughout Small Diameter Fitting Insulation, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 3% 15% 82%
2346735-061 021A	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-062 021B	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-063 021C	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-064 021D	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%



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2346735-065 021E	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-066 021F	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-067 021G	Throughout 1968 addition Plaster - Rough Coat, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-068 022A	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-069 022B	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-070 022C	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-071 022D	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-072 022E	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-073 022F	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-074 022G	Throughout 1968 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-075 023A	Throughout 1968 additon Drywall, Gray/Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
2346735-076 023B	Throughout 1968 additon Drywall, Gray/Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
2346735-077 023C	Throughout 1968 additon Drywall, Gray/Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	10% 90%
2346735-078 024A	Throughout 1968 additon Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-079 024B	Throughout 1968 additon Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-080 024C	Throughout 1968 additon Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-081 025A	adjacent to construction shop Mastic, Black Note: Insufficient amount of Mastic for Gravimetric Reduction.	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Binder/Filler	1% 97%
2346735-082 025B	adjacent to construction shop Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-083 025C	adjacent to construction shop Mastic, Black Note: Positive Stop	LAYER 1 100%				



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-084 026A	library, career center, alumni room, room 13, throughout second floor 2'x2' Ceiling Tiles, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-085 026B	library, career center, alumni room, room 13, throughout second floor 2'x2' Ceiling Tiles, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-086 026C	library, career center, alumni room, room 13, throughout second floor 2'x2' Ceiling Tiles, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-087 027A	Above 2'x2' ceiling tiles in room 13 and alumni room 1'x1' Ceiling Tiles, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Mineral Wool 85% Binder/Filler 12%
2346735-088 027B	Above 2'x2' ceiling tiles in room 13 and alumni room 1'x1' Ceiling Tiles, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Mineral Wool 85% Binder/Filler 12%
2346735-089 027C	Above 2'x2' ceiling tiles in room 13 and alumni room 1'x1' Ceiling Tiles, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Mineral Wool 85% Binder/Filler 12%
2346735-090 028A	Throughout first and second floor 1968 addition 2'x4' Ceiling Tile, Type 1, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%



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CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-091 028B	Throughout first and second floor 1968 addition 2'x4' Ceiling Tile, Type 1, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-092 028C	Throughout first and second floor 1968 addition 2'x4' Ceiling Tile, Type 1, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-093 029A	Throughout first floor 2'x4' Ceiling Tile, Type 2, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-094 029B	Throughout first floor 2'x4' Ceiling Tile, Type 2, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-095 029C	Throughout first floor 2'x4' Ceiling Tile, Type 2, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-096 030A	Throughout first floor 2'x4' Ceiling Tile, Type 3, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-097 030B	Throughout first floor 2'x4' Ceiling Tile, Type 3, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
2346735-098 030C	Throughout first floor 2'x4' Ceiling Tile, Type 3, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-099 031A	first floor admin office wall panels Mastic, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-100 031B	first floor admin office wall panels Mastic, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-101 031C	first floor admin office wall panels Mastic, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-102 032A	9"x9" floor tiles throughout Mastic, Black	LAYER 1 100%	Chrysotile	4.53%	Cellulose Fiber Binder/Filler	2% 93.47%
2346735-103 032B	9"x9" floor tiles throughout Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-104 032C	9"x9" floor tiles throughout Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-105 033A	second floor hallways Floor Leveling Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-106 033B	second floor hallways Floor Leveling Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-107 033C	second floor hallways Floor Leveling Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-108 034A	Gym Gym Floor Underlayment, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	95% 5%



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2346735-109 034B	Gym Gym Floor Underlayment, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 95% 5%
2346735-110 034C	Gym Gym Floor Underlayment, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 95% 5%
2346735-111 035A	Library and career center Carpet Mastic, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-112 035B	Library and career center Carpet Mastic, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-113 035C	Library and career center Carpet Mastic, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-114 036A	Throughout Large Diameter Fittings, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Mineral Wool Binder/Filler 5% 20% 75%
2346735-115 036B	Throughout Large Diameter Fittings, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Mineral Wool Binder/Filler 5% 20% 75%
2346735-116 036C	Throughout Large Diameter Fittings, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Mineral Wool Binder/Filler 5% 20% 75%
2346735-117 037A	Library 12"x12" Floor Tile, Red	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



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2346735-118 037B	Library 12"x12" Floor Tile, Red	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-119 037C	Library 12"x12" Floor Tile, Red	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-120 038A	Library 12"x12" Floor Tile, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-121 038B	Library 12"x12" Floor Tile, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-122 038C	Library 12"x12" Floor Tile, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-123 039A	Library Mastic, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-124 039B	Library Mastic, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-125 039C	Library Mastic, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-126 040A	Band room 12"x12" Acoustic Ceiling Tile, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber Mineral Wool Binder/Filler 2% 45% 53%



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REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-127 040B	Band room 12"x12" Acoustic Ceiling Tile, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 2% Mineral Wool 45% Binder/Filler 53%
2346735-128 040C	Band room 12"x12" Acoustic Ceiling Tile, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 2% Mineral Wool 45% Binder/Filler 53%
2346735-129 041A	1941 hallways, classrooms Jute Backed Linoleum, Gray/Brown	LAYER 1 100%	None Detected	Cellulose Fiber 5% Binder/Filler 95%
2346735-130 041B	1941 hallways, classrooms Jute Backed Linoleum, Red/Brown	LAYER 1 100%	None Detected	Cellulose Fiber 5% Binder/Filler 95%
2346735-131 041C	1941 hallways, classrooms Jute Backed Linoleum, Gray/Brown	LAYER 1 100%	None Detected	Cellulose Fiber 5% Binder/Filler 95%
2346735-132 042A	1941 hallways Pebble Pattern Floor Tile, Tan	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-133 042B	1941 hallways Pebble Pattern Floor Tile, Tan	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-134 042C	1941 hallways Pebble Pattern Floor Tile, Tan	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-135 043A	1941 hallways 12"x12" Ceiling Tile, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 45% Fibrous Glass 20% Binder/Filler 35%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc.
ADDRESS: 400 Commercial Street
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Erik Phenix
DESCRIPTION: PLM Analysis
LOCATION: Morse High School, Bath, Maine

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2346735
PROJECT #: 222.06056.201
DATE COLLECTED: 04/07/2023
COLLECTED BY: Client
DATE RECEIVED: 04/13/2023
ANALYSIS DATE: 04/27/2023
REPORT DATE: 05/05/2023
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-136 043B	1941 hallways 12"x12" Ceiling Tile, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 45% Fibrous Glass 20% Binder/Filler 35%
2346735-137 043C	1941 hallways 12"x12" Ceiling Tile, White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 45% Fibrous Glass 20% Binder/Filler 35%
2346735-138 044A	1941 hallways Glue Daubs, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-139 044B	1941 hallways Glue Daubs, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-140 044C	1941 hallways Glue Daubs, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-141 5	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-142 045B	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-143 045C	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
2346735-144 045D	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-145 045E	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-146 045F	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-147 045G	1941 addition Plaster - Skim Coat, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-148 046A	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-149 046B	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-150 046C	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-151 046D	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-152 046E	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-153 046F	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%
2346735-154 046G	1941 addition Plaster - Rough Coat, Beige	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 5% 95%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-155 047A	band room closets, first floor 12"x12" Wall Tile, White/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	65% 15% 20%
2346735-156 047B	band room closets, first floor 12"x12" Wall Tile, White/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	65% 15% 20%
2346735-157 047C	band room closets, first floor 12"x12" Wall Tile, White/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	65% 15% 20%
2346735-158 048A	band room closets, first floor Glue Daubs, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	3% 97%
2346735-159 048B	band room closets, first floor Glue Daubs, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	3% 97%
2346735-160 048C	band room closets, first floor Glue Daubs, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	3% 97%
2346735-161 049A	First floor band room closets 9"x9" Floor Tile, Green	LAYER 1 100%	Chrysotile	3.48%	Cellulose Fiber Binder/Filler	1% 95.52%
2346735-162 049B	First floor band room closets 9"x9" Floor Tile, Green Note: Positive Stop	LAYER 1 100%				
2346735-163 049C	First floor band room closets 9"x9" Floor Tile, Green Note: Positive Stop	LAYER 1 100%				



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-164 050A	First floor band room closets Mastic, Black	LAYER 1 100%	Chrysotile	6.9%	Cellulose Fiber Binder/Filler	2% 91.1%
2346735-165 050B	First floor band room closets Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-166 050C	First floor band room closets Mastic, Black Note: Positive Stop	LAYER 1 100%				
2346735-167 051A	Throughout 9"x9" Floor Tile, Brown	LAYER 1 100%	Chrysotile	5.05%	Cellulose Fiber Binder/Filler	1% 93.95%
2346735-168 051B	Throughout 9"x9" Floor Tile, Brown Note: Positive Stop	LAYER 1 100%				
2346735-169 051C	Throughout 9"x9" Floor Tile, Brown Note: Positive Stop	LAYER 1 100%				
2346735-170 052A	first floor rooms 142, 146, 147, teacher's room 9"x9" Floor Tile, Gray	LAYER 1 100%	Chrysotile	3.74%	Cellulose Fiber Binder/Filler	1% 95.26%
2346735-171 052B	first floor rooms 142, 146, 147, teacher's room 9"x9" Floor Tile, Gray Note: Positive Stop	LAYER 1 100%				
2346735-172 052C	first floor rooms 142, 146, 147, teacher's room 9"x9" Floor Tile, Gray Note: Positive Stop	LAYER 1 100%				



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2346735-173 053A	first floor, room 149 9"x9" Floor Tile, Red	LAYER 1 100%	Chrysotile	2.86%	Cellulose Fiber Binder/Filler	1% 96.14%
2346735-174 053B	first floor, room 149 9"x9" Floor Tile, Red Note: Positive Stop	LAYER 1 100%				
2346735-175 053C	first floor, room 149 9"x9" Floor Tile, Red Note: Positive Stop	LAYER 1 100%				
2346735-176 054A	First floor rooms 135, 136, 136B, 138, 140, 133 9"x9" Floor Tile, White	LAYER 1 100%	Chrysotile	2.36%	Cellulose Fiber Binder/Filler	1% 96.64%
2346735-177 054B	First floor rooms 135, 136, 136B, 138, 140, 133 9"x9" Floor Tile, White Note: Positive Stop	LAYER 1 100%				
2346735-178 054C	First floor rooms 135, 136, 136B, 138, 140, 133 9"x9" Floor Tile, White Note: Positive Stop	LAYER 1 100%				
2346735-179 055A	1968 roof Rubber Membrane, Black	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-180 055B	1968 roof Rubber Membrane, Black	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
2346735-181 055C	1968 roof Rubber Membrane, Black	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-182 055D	1968 roof Rubber Membrane, Black	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-183 056A	1968 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-184 056B	1968 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-185 056C	1968 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-186 056D	1968 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-187 057A	1968 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 85% 10% 5%
2346735-188 057B	1968 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 85% 10% 5%
2346735-189 057C	1968 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 85% 10% 5%
2346735-190 057D	1968 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 85% 10% 5%



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-191 058A	1941 roof Rubber Membrane, Black	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-192 058B	1941 roof Rubber Membrane, Black	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-193 058C	1941 roof Rubber Membrane - Not Present,	LAYER 1 100%		
2346735-194 059A	1941 roof Pressed Fiber Board, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 98% 2%
2346735-195 059B	1941 roof Pressed Fiber Board, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 98% 2%
2346735-196 059C	1941 roof Pressed Fiber Board, Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 98% 2%
2346735-197 060A	1941 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-198 060B	1941 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-199 060C	1941 roof Foam Board, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
2346735-200 061A	1941 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Fibrous Glass Binder/Filler 85% 10% 5%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2346735-201 061B	1941 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 85% Fibrous Glass 10% Binder/Filler 5%
2346735-202 061C	1941 roof Paper Backing on Foam Board, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 85% Fibrous Glass 10% Binder/Filler 5%

Gravimetric reduction performed on all NOBs unless otherwise indicated.

**Analyst
Signatory:**
Jamie Noel



2346 735

Client Ransom Consulting, Inc. 400 Commercial St Portland ME 04101
 Contact Erik Phenix, Wes Harden
 Phone 207-772-2891
 Project Morse High School
 Location Bath, Maine
 Ransom Client City of Bath
 Ransom Project # 222.06056.201
 Sample Date 4/7/2023
 Analysis Bulk PLM w/GRM prep for NOB in accordance w/MEDEP
 TAT standard
 Report Results to: ephenix@ransomenv.com, wes.harden@ransomenv.com
 PO 6154
 Notes/Requests Positive stop

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Sample ID	Material	Location
001A	Light gray caulk	Exterior vinyl frame windows and panels, 1968 addition
001B	Light gray caulk	Exterior vinyl frame windows and panels, 1968 addition
001C	Light gray caulk	Exterior vinyl frame windows and panels, 1968 addition
002A	Dark gray caulk	Exterior aluminum fram windows and security doors
002B	Dark gray caulk	Exterior aluminum fram windows and security doors
002C	Dark gray caulk	Exterior aluminum fram windows and security doors
003A	Brown caulk	Exterior window insulation board openings
003B	Brown caulk	Exterior window insulation board openings
003C	Brown caulk	Exterior window insulation board openings
004A	White caulk	Exterior vinyl frame windows 1941 addition
004B	White caulk	Exterior vinyl frame windows 1941 addition
004C	White caulk	Exterior vinyl frame windows 1941 addition
005A	Gray foam board insulation coating	Exterior window insulation board openings
005B	Gray foam board insulation coating	Exterior window insulation board openings
005C	Gray foam board insulation coating	Exterior window insulation board openings
006A	#1 Dark blue 12"x12" floor tile	Shop, second floor, third floor
006B	#1 Dark blue 12"x12" floor tile	Shop, second floor, third floor
006C	#1 Dark blue 12"x12" floor tile	Shop, second floor, third floor
007A	Tan mastic associated with 006ABC	Shop, second floor, third floor
007B	Tan mastic associated with 006ABC	Shop, second floor, third floor
007C	Tan mastic associated with 006ABC	Shop, second floor, third floor
008A	White with gray streak 12"x12" floor tile	Shop restrooms
008B	White with gray streak 12"x12" floor tile	Shop restrooms
008C	White with gray streak 12"x12" floor tile	Shop restrooms
009A	tan mastic associated with 009ABC	Shop restrooms
009B	tan mastic associated with 009ABC	Shop restrooms
009C	tan mastic associated with 009ABC	Shop restrooms
010A	White 9"x9" floor tile	Throughout
010B	White 9"x9" floor tile	Throughout
010C	White 9"x9" floor tile	Throughout
011A	Black mastic associated with 010ABC	Throughout
011B	Black mastic associated with 010ABC	Throughout
011C	Black mastic associated with 010ABC	Throughout
012A	Fibrous insulation board backing	Boys locker room
012B	Fibrous insulation board backing	Boys locker room
012C	Fibrous insulation board backing	Boys locker room
013A	#2 blue 12"x12" floor tile	Second floor, third floor
013B	#2 blue 12"x12" floor tile	Second floor, third floor
013C	#2 blue 12"x12" floor tile	Second floor, third floor
014A	#3 blue 12"x12" floor tile	Second floor, third floor
014B	#3 blue 12"x12" floor tile	Second floor, third floor
014C	#3 blue 12"x12" floor tile	Second floor, third floor
015A	White with tan fleck 12"x12" floor tile	Second and third floor classrooms
015B	White with tan fleck 12"x12" floor tile	Second and third floor classrooms
015C	White with tan fleck 12"x12" floor tile	Second and third floor classrooms
016A	Mastic associated with 015ABC	Second and third floor classrooms
016B	Mastic associated with 015ABC	Second and third floor classrooms
016C	Mastic associated with 015ABC	Second and third floor classrooms
017A	White with blue fleck 12"x12" floor tile	Second floor hallway, room 123
017B	White with blue fleck 12"x12" floor tile	Second floor hallway, room 123
017C	White with blue fleck 12"x12" floor tile	Second floor hallway, room 123
018A	Mastic associated with 017ABC	Second floor hallway, room 123
018B	Mastic associated with 017ABC	Second floor hallway, room 123



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018C	Mastic associated with 017ABC	Second floor hallway, room 123
019A	#4 blue 12"x12" floor tile	Second floor, third floor
019B	#4 blue 12"x12" floor tile	Second floor, third floor
019C	#4 blue 12"x12" floor tile	Second floor, third floor
020A	Small diameter fitting insulation	throughout
020B	Small diameter fitting insulation	throughout
020C	Small diameter fitting insulation	throughout
021A	Plaster - rough coat	Throughout 1968 addition
021B	Plaster - rough coat	Throughout 1968 addition
021C	Plaster - rough coat	Throughout 1968 addition
021D	Plaster - rough coat	Throughout 1968 addition
021E	Plaster - rough coat	Throughout 1968 addition
021F	Plaster - rough coat	Throughout 1968 addition
021G	Plaster - rough coat	Throughout 1968 addition
022A	Plaster - skim coat	Throughout 1968 addition
022B	Plaster - skim coat	Throughout 1968 addition
022C	Plaster - skim coat	Throughout 1968 addition
022D	Plaster - skim coat	Throughout 1968 addition
022E	Plaster - skim coat	Throughout 1968 addition
022F	Plaster - skim coat	Throughout 1968 addition
022G	Plaster - skim coat	Throughout 1968 addition
023A	Drywall	Throughout 1968 addition
023B	Drywall	Throughout 1968 addition
023C	Drywall	Throughout 1968 addition
024A	Joint compound	Throughout 1968 addition
024B	Joint compound	Throughout 1968 addition
024C	Joint compound	Throughout 1968 addition
025A	Black mastic	adjacent to construction shop
025B	Black mastic	adjacent to construction shop
025C	Black mastic	adjacent to construction shop
026A	2'x2' ceiling tiles	library, career center, alumni room, room 13, throughout second floor
026B	2'x2' ceiling tiles	library, career center, alumni room, room 13, throughout second floor
026C	2'x2' ceiling tiles	library, career center, alumni room, room 13, throughout second floor
027A	1'x1' ceiling tiles	Above 2'x2' ceiling tiles in room 13 and alumni room
027B	1'x1' ceiling tiles	Above 2'x2' ceiling tiles in room 13 and alumni room
027C	1'x1' ceiling tiles	Above 2'x2' ceiling tiles in room 13 and alumni room
028A	2'x4' ceiling tile, type 1	Throughout first and second floor 1968 addition
028B	2'x4' ceiling tile, type 1	Throughout first and second floor 1968 addition
028C	2'x4' ceiling tile, type 1	Throughout first and second floor 1968 addition
029A	2'x4' ceiling tile, type 2	Throughout first floor
029B	2'x4' ceiling tile, type 2	Throughout first floor
029C	2'x4' ceiling tile, type 2	Throughout first floor
030A	2'x4' ceiling tile, type 3	Throughout first floor
030B	2'x4' ceiling tile, type 3	Throughout first floor
030C	2'x4' ceiling tile, type 3	Throughout first floor
031A	Tan mastic	first floor admin office wall panels
031B	Tan mastic	first floor admin office wall panels
031C	Tan mastic	first floor admin office wall panels
032A	Black mastic	9"x9" floor tiles throughout
032B	Black mastic	9"x9" floor tiles throughout
032C	Black mastic	9"x9" floor tiles throughout
033A	Floor leveling compound	second floor hallways
033B	Floor leveling compound	second floor hallways
033C	Floor leveling compound	second floor hallways
034A	Gym floor underlayment	Gym
034B	Gym floor underlayment	Gym
034C	Gym floor underlayment	Gym
035A	Carpet mastic - yellow	Library and career center
035B	Carpet mastic - yellow	Library and career center
035C	Carpet mastic - yellow	Library and career center
036A	Large diameter fittings	Throughout
036B	Large diameter fittings	Throughout
036C	Large diameter fittings	Throughout
037A	Red 12"x12" floor tile	Library
037B	Red 12"x12" floor tile	Library
037C	Red 12"x12" floor tile	Library
038A	gray with white fleck 12"x12" floor tile	Library
038B	gray with white fleck 12"x12" floor tile	Library
038C	gray with white fleck 12"x12" floor tile	Library
039A	Yellow mastic associated with 037ABC and 038ABC	Library



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039B	Yellow mastic associated with 037ABC and 038ABC	Library
039C	Yellow mastic associated with 037ABC and 038ABC	Library
040A	12"x12" acoustic tile	Band room
040B	12"x12" acoustic tile	Band room
040C	12"x12" acoustic tile	Band room
041A	Jute backed linoleum	1941 hallways, classrooms
041B	Jute backed linoleum	1941 hallways, classrooms
041C	Jute backed linoleum	1941 hallways, classrooms
042A	Pebble pattern floor tile	1941 hallways
042B	Pebble pattern floor tile	1941 hallways
042C	Pebble pattern floor tile	1941 hallways
043A	White 12"x12" ceiling tile	1941 hallways
043B	White 12"x12" ceiling tile	1941 hallways
043C	White 12"x12" ceiling tile	1941 hallways
044A	Brown glue daubs associated with 043ABC	1941 hallways
044B	Brown glue daubs associated with 043ABC	1941 hallways
044C	Brown glue daubs associated with 043ABC	1941 hallways
045A	Plaster - skim coat	1941 addition
045B	Plaster - skim coat	1941 addition
045C	Plaster - skim coat	1941 addition
045D	Plaster - skim coat	1941 addition
045E	Plaster - skim coat	1941 addition
045F	Plaster - skim coat	1941 addition
045G	Plaster - skim coat	1941 addition
046A	Plaster - rough coat	1941 addition
046B	Plaster - rough coat	1941 addition
046C	Plaster - rough coat	1941 addition
046D	Plaster - rough coat	1941 addition
046E	Plaster - rough coat	1941 addition
046F	Plaster - rough coat	1941 addition
046G	Plaster - rough coat	1941 addition
047A	12"x12" wall tile	band room closets, first floor
047B	12"x12" wall tile	band room closets, first floor
047C	12"x12" wall tile	band room closets, first floor
048A	Brown glue daubs associated with 047ABC	band room closets, first floor
048B	Brown glue daubs associated with 047ABC	band room closets, first floor
048C	Brown glue daubs associated with 047ABC	band room closets, first floor
049A	Green 9"x9" floor tile	First floor band room closets
049B	Green 9"x9" floor tile	First floor band room closets
049C	Green 9"x9" floor tile	First floor band room closets
050A	Black mastic associated with 049ABC	First floor band room closets
050B	Black mastic associated with 049ABC	First floor band room closets
050C	Black mastic associated with 049ABC	First floor band room closets
051A	Brown 9"x9" floor tile	Throughout
051B	Brown 9"x9" floor tile	Throughout
051C	Brown 9"x9" floor tile	Throughout
052A	Gray with white fleck 9"x9" floor tile	first floor rooms 142, 146, 147, teacher's room
052B	Gray with white fleck 9"x9" floor tile	first floor rooms 142, 146, 147, teacher's room
052C	Gray with white fleck 9"x9" floor tile	first floor rooms 142, 146, 147, teacher's room
053A	Red 9"x9" floor tile	first floor, room 149
053B	Red 9"x9" floor tile	first floor, room 149
053C	Red 9"x9" floor tile	first floor, room 149
054A	White 9"x9" floor tile	First floor rooms 135, 136, 136B, 138, 140, 133
054B	White 9"x9" floor tile	First floor rooms 135, 136, 136B, 138, 140, 133
054C	White 9"x9" floor tile	First floor rooms 135, 136, 136B, 138, 140, 133
055A	Black rubber membrane	1968 roof
055B	Black rubber membrane	1968 roof
055C	Black rubber membrane	1968 roof
055D	Black rubber membrane	1968 roof
056A	yellow foam board	1968 roof
056B	yellow foam board	1968 roof
056C	yellow foam board	1968 roof
056D	yellow foam board	1968 roof
057A	gray paper backing on foam board	1968 roof
057B	gray paper backing on foam board	1968 roof
057C	gray paper backing on foam board	1968 roof
057D	gray paper backing on foam board	1968 roof
058A	Black rubber membrane	1941 roof
058B	Black rubber membrane	1941 roof
058C	Black rubber membrane	1941 roof

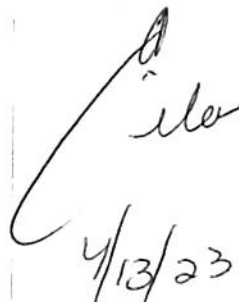
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059A pressed fiber board
059B pressed fiber board
059C pressed fiber board
060A yellow foam board
060B yellow foam board
060C yellow foam board
061A gray paper backing on foam board
061B gray paper backing on foam board
061C gray paper backing on foam board
>>>

1941 roof
1941 roof
1941 roof
1941 roof
1941 roof
1941 roof
1941 roof
1941 roof
1941 roof

 4-12-23


4/13/23

9:10



ANALYTICAL REPORT

Lab Number:	L2318879
Client:	Ransom Consulting, LLC. 400 Commercial Street Suite 404 Portland, ME 04101-4660
ATTN:	Steve Dyer
Phone:	(207) 772-2891
Project Name:	FORMER MORSE HIGH SCHOOL
Project Number:	222.06056.201
Report Date:	04/17/23

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2318879-01	PCB-1	SOLID	BATH, ME	04/06/23 08:55	04/10/23
L2318879-02	PCB-2	SOLID	BATH, ME	04/06/23 10:05	04/10/23
L2318879-03	PCB-3	SOLID	BATH, ME	04/06/23 10:10	04/10/23
L2318879-04	PCB-4	SOLID	BATH, ME	04/06/23 09:25	04/10/23
L2318879-05	PCB-5	SOLID	BATH, ME	04/06/23 10:05	04/10/23
L2318879-06	PCB-6	SOLID	BATH, ME	04/06/23 15:20	04/10/23
L2318879-07	PCB-DUP	SOLID	BATH, ME	04/06/23 10:15	04/10/23

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Case Narrative (continued)

PCBs

L2318879-05: The sample has elevated detection limits due to limited sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: *Tiffani Morrissey* - Tiffani Morrissey

Title: Technical Director/Representative

Date: 04/17/23

ORGANICS

PCBS

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-01
Client ID: PCB-1
Sample Location: BATH, ME

Date Collected: 04/06/23 08:55
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 11:41
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	660	--	1	A
Aroclor 1221	ND		ug/kg	660	--	1	A
Aroclor 1232	ND		ug/kg	660	--	1	A
Aroclor 1242	ND		ug/kg	330	--	1	A
Aroclor 1248	ND		ug/kg	660	--	1	A
Aroclor 1254	ND		ug/kg	660	--	1	A
Aroclor 1260	ND		ug/kg	660	--	1	A
Aroclor 1262	ND		ug/kg	660	--	1	A
Aroclor 1268	ND		ug/kg	330	--	1	A
PCBs, Total	ND		ug/kg	330	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	92		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	91		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-02
Client ID: PCB-2
Sample Location: BATH, ME

Date Collected: 04/06/23 10:05
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 11:49
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	617	--	1	A
Aroclor 1221	ND		ug/kg	617	--	1	A
Aroclor 1232	ND		ug/kg	617	--	1	A
Aroclor 1242	ND		ug/kg	309	--	1	A
Aroclor 1248	ND		ug/kg	617	--	1	A
Aroclor 1254	ND		ug/kg	617	--	1	A
Aroclor 1260	ND		ug/kg	617	--	1	A
Aroclor 1262	ND		ug/kg	617	--	1	A
Aroclor 1268	ND		ug/kg	309	--	1	A
PCBs, Total	ND		ug/kg	309	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-03
Client ID: PCB-3
Sample Location: BATH, ME

Date Collected: 04/06/23 10:10
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 11:57
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	562	--	1	A
Aroclor 1221	ND		ug/kg	562	--	1	A
Aroclor 1232	ND		ug/kg	562	--	1	A
Aroclor 1242	ND		ug/kg	281	--	1	A
Aroclor 1248	ND		ug/kg	562	--	1	A
Aroclor 1254	ND		ug/kg	562	--	1	A
Aroclor 1260	ND		ug/kg	562	--	1	A
Aroclor 1262	ND		ug/kg	562	--	1	A
Aroclor 1268	ND		ug/kg	281	--	1	A
PCBs, Total	ND		ug/kg	281	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-04
Client ID: PCB-4
Sample Location: BATH, ME

Date Collected: 04/06/23 09:25
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 12:05
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	631	--	1	A
Aroclor 1221	ND		ug/kg	631	--	1	A
Aroclor 1232	ND		ug/kg	631	--	1	A
Aroclor 1242	ND		ug/kg	315	--	1	A
Aroclor 1248	ND		ug/kg	631	--	1	A
Aroclor 1254	ND		ug/kg	631	--	1	A
Aroclor 1260	ND		ug/kg	631	--	1	B
Aroclor 1262	ND		ug/kg	631	--	1	A
Aroclor 1268	ND		ug/kg	315	--	1	A
PCBs, Total	ND		ug/kg	315	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-05
Client ID: PCB-5
Sample Location: BATH, ME

Date Collected: 04/06/23 10:05
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 12:13
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	980	--	1	A
Aroclor 1221	ND		ug/kg	980	--	1	A
Aroclor 1232	ND		ug/kg	980	--	1	A
Aroclor 1242	ND		ug/kg	490	--	1	A
Aroclor 1248	ND		ug/kg	980	--	1	A
Aroclor 1254	6360		ug/kg	980	--	1	B
Aroclor 1260	ND		ug/kg	980	--	1	A
Aroclor 1262	ND		ug/kg	980	--	1	A
Aroclor 1268	ND		ug/kg	490	--	1	A
PCBs, Total	6360		ug/kg	490	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	91		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-06
Client ID: PCB-6
Sample Location: BATH, ME

Date Collected: 04/06/23 15:20
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 12:21
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	562	--	1	A
Aroclor 1221	ND		ug/kg	562	--	1	A
Aroclor 1232	ND		ug/kg	562	--	1	A
Aroclor 1242	ND		ug/kg	281	--	1	A
Aroclor 1248	ND		ug/kg	562	--	1	A
Aroclor 1254	7340		ug/kg	562	--	1	B
Aroclor 1260	ND		ug/kg	562	--	1	A
Aroclor 1262	ND		ug/kg	562	--	1	A
Aroclor 1268	ND		ug/kg	281	--	1	A
PCBs, Total	7340		ug/kg	281	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	95		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

SAMPLE RESULTS

Lab ID: L2318879-07
Client ID: PCB-DUP
Sample Location: BATH, ME

Date Collected: 04/06/23 10:15
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 04/14/23 12:29
Analyst: MEO
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3540C
Extraction Date: 04/12/23 11:45
Cleanup Method: EPA 3630
Cleanup Date: 04/13/23
Cleanup Method: EPA 3665A
Cleanup Date: 04/14/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	635	--	1	A
Aroclor 1221	ND		ug/kg	635	--	1	A
Aroclor 1232	ND		ug/kg	635	--	1	A
Aroclor 1242	ND		ug/kg	317	--	1	A
Aroclor 1248	ND		ug/kg	635	--	1	A
Aroclor 1254	ND		ug/kg	635	--	1	A
Aroclor 1260	ND		ug/kg	635	--	1	A
Aroclor 1262	ND		ug/kg	635	--	1	A
Aroclor 1268	ND		ug/kg	317	--	1	A
PCBs, Total	ND		ug/kg	317	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		30-150	A
Decachlorobiphenyl	99		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	100		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082A
 Analytical Date: 04/14/23 10:37
 Analyst: MEO

Extraction Method: EPA 3540C
 Extraction Date: 04/12/23 11:45
 Cleanup Method: EPA 3630
 Cleanup Date: 04/13/23
 Cleanup Method: EPA 3665A
 Cleanup Date: 04/14/23
 Cleanup Method: EPA 3660B
 Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-07 Batch: WG1765774-1						
Aroclor 1016	ND		ug/kg	631	--	A
Aroclor 1221	ND		ug/kg	631	--	A
Aroclor 1232	ND		ug/kg	631	--	A
Aroclor 1242	ND		ug/kg	315	--	A
Aroclor 1248	ND		ug/kg	631	--	A
Aroclor 1254	ND		ug/kg	631	--	A
Aroclor 1260	ND		ug/kg	631	--	A
Aroclor 1262	ND		ug/kg	631	--	A
Aroclor 1268	ND		ug/kg	315	--	A
PCBs, Total	ND		ug/kg	315	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	69		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-07 Batch: WG1765774-2 WG1765774-3									
Aroclor 1016	74		80		40-140	8		50	A
Aroclor 1260	92		85		40-140	8		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		82		30-150	A
Decachlorobiphenyl	91		82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		84		30-150	B
Decachlorobiphenyl	90		82		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318879**Project Number:** 222.06056.201**Report Date:** 04/17/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2318879-01A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-01B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-02A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-02B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-03A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-03B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-04A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-04B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-05A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-05B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-06A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-06B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-07A	Plastic 2oz unpreserved for TS	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)
L2318879-07B	Glass 60mL/2oz unpreserved	A	NA		4.5	Y	Absent		PCB-8082-CAULK(365)

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318879
Report Date: 04/17/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

APPENDIX C

Laboratory Reports

Phase II ESA
1941 and 1968 Additions former Morse High School
826 High Street
Bath, Maine



ANALYTICAL REPORT

Lab Number:	L2318878
Client:	Ransom Consulting, LLC. 400 Commercial Street Suite 404 Portland, ME 04101-4660
ATTN:	Steve Dyer
Phone:	(207) 772-2891
Project Name:	FORMER MORSE HIGH SCHOOL
Project Number:	222.06056.201
Report Date:	04/24/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2318878-01	SV101	SOIL_VAPOR	BATH	04/06/23 11:24	04/10/23
L2318878-02	SV102	SOIL_VAPOR	BATH	04/06/23 13:35	04/10/23
L2318878-03	SVDUP	SOIL_VAPOR	BATH	04/06/23 11:24	04/10/23

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on April 5, 2023. The canister certification results are provided as an addendum.

Petroleum Hydrocarbons in Air

L2318878-01,02,03: All significant concentrations of non-petroleum VOCs detected in the TO-15 analysis were subtracted from the corresponding hydrocarbon ranges.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 04/24/23

AIR

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-01

Client ID: SV101

Sample Location: BATH

Date Collected: 04/06/23 11:24

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 22:49

Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	1.75	0.500	--	3.01	0.861	--		1
Dichlorodifluoromethane	0.466	0.200	--	2.30	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	20.4	1.00	--	48.5	2.38	--		1
Trichlorofluoromethane	0.235	0.200	--	1.32	1.12	--		1
iso-Propyl Alcohol	0.934	0.500	--	2.30	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	1.59	0.500	--	4.69	1.47	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-01

Client ID: SV101

Sample Location: BATH

Date Collected: 04/06/23 11:24

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.380	0.200	--	1.34	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.218	0.200	--	0.696	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Xylene (Total)	2.84	0.200	--	12.3	0.869	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.693	0.200	--	2.84	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	0.641	0.500	--	2.63	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
Toluene	1.19	0.200	--	4.48	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-01

Client ID: SV101

Sample Location: BATH

Date Collected: 04/06/23 11:24

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	5.01	0.200	--	34.0	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.464	0.200	--	2.02	0.869	--		1
p/m-Xylene	1.70	0.400	--	7.38	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	1.14	0.200	--	4.95	0.869	--		1
4-Ethyltoluene	0.522	0.200	--	2.57	0.983	--		1
1,3,5-Trimethylbenzene	1.39	0.200	--	6.83	0.983	--		1
1,2,4-Trimethylbenzene	3.50	0.200	--	17.2	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-02

Client ID: SV102

Sample Location: BATH

Date Collected: 04/06/23 13:35

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 23:28

Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	42.4	0.500	--	73.0	0.861	--		1
Dichlorodifluoromethane	0.470	0.200	--	2.32	0.989	--		1
Chloromethane	0.374	0.200	--	0.772	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	6.56	0.200	--	14.5	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	18.0	5.00	--	33.9	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	163	1.00	--	387	2.38	--		1
Trichlorofluoromethane	0.273	0.200	--	1.53	1.12	--		1
iso-Propyl Alcohol	3.42	0.500	--	8.41	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	4.97	0.200	--	15.5	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	33.3	0.500	--	98.2	1.47	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-02

Client ID: SV102

Sample Location: BATH

Date Collected: 04/06/23 13:35

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.316	0.200	--	1.54	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	2.52	0.200	--	8.88	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	5.74	0.200	--	18.3	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	0.510	0.200	--	1.76	0.688	--		1
Xylene (Total)	29.2	0.200	--	127	0.869	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	5.16	0.200	--	24.1	0.934	--		1
Heptane	3.19	0.200	--	13.1	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	1.44	0.500	--	5.90	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
Toluene	9.19	0.200	--	34.6	0.754	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
2-Hexanone	1.09	0.200	--	4.47	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-02

Client ID: SV102

Sample Location: BATH

Date Collected: 04/06/23 13:35

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	7.58	0.200	--	51.4	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	8.39	0.200	--	36.4	0.869	--		1
p/m-Xylene	22.3	0.400	--	96.9	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.649	0.200	--	2.76	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	6.90	0.200	--	30.0	0.869	--		1
4-Ethyltoluene	2.24	0.200	--	11.0	0.983	--		1
1,3,5-Trimethylbenzene	3.94	0.200	--	19.4	0.983	--		1
1,2,4-Trimethylbenzene	10.0	0.200	--	49.2	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	1.58	0.200	--	8.28	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	100		60-140



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-03

Client ID: SVDUP

Sample Location: BATH

Date Collected: 04/06/23 11:24

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 48,TO-15

Analytical Date: 04/22/23 00:07

Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	1.64	0.500	--	2.82	0.861	--		1
Dichlorodifluoromethane	0.446	0.200	--	2.21	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	20.5	1.00	--	48.7	2.38	--		1
Trichlorofluoromethane	0.225	0.200	--	1.26	1.12	--		1
iso-Propyl Alcohol	1.00	0.500	--	2.46	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	1.44	0.500	--	4.25	1.47	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-03

Client ID: SVDUP

Sample Location: BATH

Date Collected: 04/06/23 11:24

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.383	0.200	--	1.35	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.226	0.200	--	0.722	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Xylene (Total)	2.96	0.200	--	12.9	0.869	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.716	0.200	--	2.93	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	0.640	0.500	--	2.62	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
Toluene	1.24	0.200	--	4.67	0.754	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-03

Client ID: SVDUP

Sample Location: BATH

Date Collected: 04/06/23 11:24

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	5.22	0.200	--	35.4	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.495	0.200	--	2.15	0.869	--		1
p/m-Xylene	1.76	0.400	--	7.64	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	1.19	0.200	--	5.17	0.869	--		1
4-Ethyltoluene	0.572	0.200	--	2.81	0.983	--		1
1,3,5-Trimethylbenzene	1.33	0.200	--	6.54	0.983	--		1
1,2,4-Trimethylbenzene	3.51	0.200	--	17.3	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	96		60-140



Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318878

Project Number: 222.06056.201

Report Date: 04/24/23

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 17:37

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1769655-4								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 17:37

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1769655-4								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylene (Total)	ND	0.200	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1



Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318878

Project Number: 222.06056.201

Report Date: 04/24/23

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 17:37

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1769655-4								
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Tertiary-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl Acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 17:37

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1769655-4								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane (C10)	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/21/23 17:37

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1769655-4								
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane (C12)	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056.201

Lab Number: L2318878

Report Date: 04/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1769655-3								
Chlorodifluoromethane	83		-		70-130	-		
Propylene	82		-		70-130	-		
Propane	94		-		70-130	-		
Dichlorodifluoromethane	92		-		70-130	-		
Chloromethane	101		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	87		-		70-130	-		
Methanol	100		-		70-130	-		
Vinyl chloride	79		-		70-130	-		
1,3-Butadiene	89		-		70-130	-		
Butane	77		-		70-130	-		
Bromomethane	83		-		70-130	-		
Chloroethane	94		-		70-130	-		
Ethyl Alcohol	87		-		40-160	-		
Dichlorofluoromethane	82		-		70-130	-		
Vinyl bromide	85		-		70-130	-		
Acrolein	84		-		60-113	-		
Acetone	79		-		40-160	-		
Acetonitrile	71		-		70-130	-		
Trichlorofluoromethane	98		-		70-130	-		
iso-Propyl Alcohol	74		-		40-160	-		
Acrylonitrile	92		-		70-130	-		
Pentane	79		-		70-130	-		
Ethyl ether	96		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056.201

Lab Number: L2318878

Report Date: 04/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1769655-3								
1,1-Dichloroethene	83		-		70-130	-		
tert-Butyl Alcohol	67	Q	-		70-130	-		
Methylene chloride	98		-		70-130	-		
3-Chloropropene	77		-		70-130	-		
Carbon disulfide	78		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	85		-		70-130	-		
trans-1,2-Dichloroethene	88		-		70-130	-		
1,1-Dichloroethane	95		-		70-130	-		
Methyl tert butyl ether	81		-		70-130	-		
Vinyl acetate	97		-		70-130	-		
2-Butanone	93		-		70-130	-		
cis-1,2-Dichloroethene	94		-		70-130	-		
Ethyl Acetate	81		-		70-130	-		
Chloroform	93		-		70-130	-		
Tetrahydrofuran	88		-		70-130	-		
2,2-Dichloropropane	88		-		70-130	-		
1,2-Dichloroethane	96		-		70-130	-		
n-Hexane	85		-		70-130	-		
Isopropyl Ether	80		-		70-130	-		
Ethyl-Tert-Butyl-Ether	75		-		70-130	-		
1,2-Dichloroethene (total)	91		-			-		
1,2-Dichloroethene (total)	91		-			-		
1,1,1-Trichloroethane	104		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318878

Project Number: 222.06056.201

Report Date: 04/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1769655-3								
1,1-Dichloropropene	94		-		70-130	-		
Benzene	86		-		70-130	-		
Carbon tetrachloride	105		-		70-130	-		
Cyclohexane	84		-		70-130	-		
Tertiary-Amyl Methyl Ether	78		-		70-130	-		
Dibromomethane	96		-		70-130	-		
1,2-Dichloropropane	99		-		70-130	-		
Bromodichloromethane	93		-		70-130	-		
1,4-Dioxane	85		-		70-130	-		
Trichloroethene	97		-		70-130	-		
2,2,4-Trimethylpentane	88		-		70-130	-		
Methyl Methacrylate	93		-		40-160	-		
Heptane	108		-		70-130	-		
cis-1,3-Dichloropropene	97		-		70-130	-		
4-Methyl-2-pentanone	102		-		70-130	-		
trans-1,3-Dichloropropene	84		-		70-130	-		
1,1,2-Trichloroethane	100		-		70-130	-		
Toluene	93		-		70-130	-		
1,3-Dichloropropane	93		-		70-130	-		
2-Hexanone	98		-		70-130	-		
Dibromochloromethane	104		-		70-130	-		
1,2-Dibromoethane	100		-		70-130	-		
Butyl Acetate	84		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056.201

Lab Number: L2318878

Report Date: 04/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1769655-3								
Octane	86		-		70-130	-		
Tetrachloroethene	99		-		70-130	-		
1,1,1,2-Tetrachloroethane	98		-		70-130	-		
Chlorobenzene	97		-		70-130	-		
Ethylbenzene	108		-		70-130	-		
p/m-Xylene	110		-		70-130	-		
Bromoform	107		-		70-130	-		
Styrene	103		-		70-130	-		
1,1,2,2-Tetrachloroethane	101		-		70-130	-		
o-Xylene	112		-		70-130	-		
1,2,3-Trichloropropane	100		-		70-130	-		
Nonane (C9)	111		-		70-130	-		
Isopropylbenzene	105		-		70-130	-		
Bromobenzene	99		-		70-130	-		
o-Chlorotoluene	100		-		70-130	-		
n-Propylbenzene	103		-		70-130	-		
p-Chlorotoluene	105		-		70-130	-		
4-Ethyltoluene	103		-		70-130	-		
1,3,5-Trimethylbenzene	103		-		70-130	-		
tert-Butylbenzene	96		-		70-130	-		
1,2,4-Trimethylbenzene	103		-		70-130	-		
Decane (C10)	96		-		70-130	-		
Benzyl chloride	101		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056.201

Lab Number: L2318878

Report Date: 04/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1769655-3								
1,3-Dichlorobenzene	114		-		70-130	-		
1,4-Dichlorobenzene	116		-		70-130	-		
sec-Butylbenzene	96		-		70-130	-		
p-Isopropyltoluene	85		-		70-130	-		
1,2-Dichlorobenzene	110		-		70-130	-		
n-Butylbenzene	99		-		70-130	-		
1,2-Dibromo-3-chloropropane	94		-		70-130	-		
Undecane	92		-		70-130	-		
Dodecane (C12)	99		-		70-130	-		
1,2,4-Trichlorobenzene	102		-		70-130	-		
Naphthalene	101		-		70-130	-		
1,2,3-Trichlorobenzene	102		-		70-130	-		
Hexachlorobutadiene	107		-		70-130	-		

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-01

Date Collected: 04/06/23 11:24

Client ID: SV101

Date Received: 04/10/23

Sample Location: BATH

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 96,APH

Analytical Date: 04/21/23 22:49

Analyst: TJS

Quality Control Information

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
Benzene	0.84		ug/m3	0.60	--	1
C5-C8 Aliphatics, Adjusted	55		ug/m3	10	--	1
Toluene	4.8		ug/m3	0.90	--	1
Ethylbenzene	1.9		ug/m3	0.90	--	1
p/m-Xylene	7.4		ug/m3	0.90	--	1
o-Xylene	5.2		ug/m3	0.90	--	1
C9-C12 Aliphatics, Adjusted	59		ug/m3	10	--	1
C9-C10 Aromatics Total	90		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		50-200
Bromochloromethane	101		50-200
Chlorobenzene-d5	102		50-200

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-02

Date Collected: 04/06/23 13:35

Client ID: SV102

Date Received: 04/10/23

Sample Location: BATH

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 96,APH

Analytical Date: 04/21/23 23:28

Analyst: TJS

Quality Control Information

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
Benzene	22		ug/m3	0.60	--	1
C5-C8 Aliphatics, Adjusted	780		ug/m3	10	--	1
Toluene	37		ug/m3	0.90	--	1
Ethylbenzene	35		ug/m3	0.90	--	1
p/m-Xylene	97		ug/m3	0.90	--	1
o-Xylene	31		ug/m3	0.90	--	1
C9-C12 Aliphatics, Adjusted	740		ug/m3	10	--	1
C9-C10 Aromatics Total	330		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	100		50-200
Bromochloromethane	102		50-200
Chlorobenzene-d5	104		50-200

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**SAMPLE RESULTS**

Lab ID: L2318878-03

Date Collected: 04/06/23 11:24

Client ID: SVDUP

Date Received: 04/10/23

Sample Location: BATH

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 96,APH

Analytical Date: 04/22/23 00:07

Analyst: TJS

Quality Control Information

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	0.50	--	1
Benzene	0.87		ug/m3	0.60	--	1
C5-C8 Aliphatics, Adjusted	53		ug/m3	10	--	1
Toluene	5.1		ug/m3	0.90	--	1
Ethylbenzene	2.1		ug/m3	0.90	--	1
p/m-Xylene	7.7		ug/m3	0.90	--	1
o-Xylene	5.5		ug/m3	0.90	--	1
C9-C12 Aliphatics, Adjusted	57		ug/m3	10	--	1
C9-C10 Aromatics Total	90		ug/m3	10	--	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	98		50-200
Bromochloromethane	100		50-200
Chlorobenzene-d5	100		50-200

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

Method Blank Analysis Batch Quality Control

Analytical Method: 96,APH
 Analytical Date: 04/21/23 17:37
 Analyst: TJS

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbons in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1769653-4					
1,3-Butadiene	ND		ug/m3	0.50	--
Methyl tert butyl ether	ND		ug/m3	0.70	--
Benzene	ND		ug/m3	0.60	--
C5-C8 Aliphatics, Adjusted	ND		ug/m3	10	--
Toluene	ND		ug/m3	0.90	--
Ethylbenzene	ND		ug/m3	0.90	--
p/m-Xylene	ND		ug/m3	0.90	--
o-Xylene	ND		ug/m3	0.90	--
Naphthalene	ND		ug/m3	1.1	--
C9-C12 Aliphatics, Adjusted	ND		ug/m3	10	--
C9-C10 Aromatics Total	ND		ug/m3	10	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056.201

Lab Number: L2318878

Report Date: 04/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbons in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1769653-3								
1,3-Butadiene	124		-		70-130	-		
Methyl tert butyl ether	70		-		70-130	-		
Benzene	103		-		70-130	-		
C5-C8 Aliphatics, Adjusted	95		-		70-130	-		
Toluene	100		-		70-130	-		
Ethylbenzene	104		-		70-130	-		
p/m-Xylene	109		-		70-130	-		
o-Xylene	117		-		70-130	-		
Naphthalene	86		-		50-150	-		
C9-C12 Aliphatics, Adjusted	99		-		70-130	-		
C9-C10 Aromatics Total	88		-		70-130	-		

Project Name: FORMER MORSE HIGH SCHOOL

Serial_No: 04242315:24
Lab Number: L2318878

Project Number: 222.06056.201

Report Date: 04/24/23

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2318878-01	SV101	01597	SV200	04/05/23	419478		-	-	-	Pass	218	212	3
L2318878-01	SV101	174	2.7L Can	04/05/23	419478	L2316281-02	Pass	-29.8	1.5	-	-	-	-
L2318878-02	SV102	02121	SV200	04/05/23	419478		-	-	-	Pass	216	211	2
L2318878-02	SV102	2875	2.7L Can	04/05/23	419478	L2316281-02	Pass	-29.7	0.0	-	-	-	-
L2318878-03	SVDUP	02316	SV200	04/05/23	419478		-	-	-	Pass	221	217	2
L2318878-03	SVDUP	3454	2.7L Can	04/05/23	419478	L2316281-02	Pass	-29.5	1.5	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2316281
Report Date: 04/24/23

Air Canister Certification Results

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location:

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 03/29/23 19:14
Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2316281
Report Date: 04/24/23

Air Canister Certification Results

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location:

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2316281
Report Date: 04/24/23

Air Canister Certification Results

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location:

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2316281
Report Date: 04/24/23

Air Canister Certification Results

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location:

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2316281**Project Number:** CANISTER QC BAT**Report Date:** 04/24/23**Air Canister Certification Results**

Lab ID: L2316281-02

Date Collected: 03/28/23 18:00

Client ID: CAN 2856 SHELF 8

Date Received: 03/29/23

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				
No Tentatively Identified Compounds				

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2316281
Report Date: 04/24/23

Air Canister Certification Results

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location:

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 03/29/23 19:14
Analyst: RAY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2316281
Report Date: 04/24/23

Air Canister Certification Results

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location:

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2316281**Project Number:** CANISTER QC BAT**Report Date:** 04/24/23**Air Canister Certification Results**

Lab ID: L2316281-02

Date Collected: 03/28/23 18:00

Client ID: CAN 2856 SHELF 8

Date Received: 03/29/23

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	93		60-140

AIR Petro Can Certification

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2316281**Project Number:** CANISTER QC BAT**Report Date:** 04/24/23**AIR CAN CERTIFICATION RESULTS**

Lab ID: L2316281-02
Client ID: CAN 2856 SHELF 8
Sample Location: Not Specified
Matrix: Air
Analytical Method: 96,APH
Analytical Date: 03/29/23 19:14
Analyst: RAY

Date Collected: 03/28/23 18:00
Date Received: 03/29/23
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air						
1,3-Butadiene	ND		ug/m3	0.50	--	1
Benzene	ND		ug/m3	0.60	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/m3	10	--	1
Toluene	ND		ug/m3	0.90	--	1
Ethylbenzene	ND		ug/m3	0.90	--	1
p/m-Xylene	ND		ug/m3	0.90	--	1
o-Xylene	ND		ug/m3	0.90	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/m3	10	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318878**Project Number:** 222.06056.201**Report Date:** 04/24/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

NA Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2318878-01A	Canister - 2.7 Liter	NA	NA			Y	Absent		APH-10(30),TO15-LL(30)
L2318878-02A	Canister - 2.7 Liter	NA	NA			Y	Absent		APH-10(30),TO15-LL(30)
L2318878-03A	Canister - 2.7 Liter	NA	NA			Y	Absent		APH-10(30),TO15-LL(30)

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056.201

Lab Number: L2318878
Report Date: 04/24/23

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.
- 96 Method for the Determination of Air-Phase Petroleum Hydrocarbons (APH), MassDEP, December 2009, Revision 1 with QC Requirements & Performance Standards for the Analysis of APH by GC/MS under the Massachusetts Contingency Plan, WSC-CAM-IXA, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



ANALYTICAL REPORT

Lab Number:	L2318873
Client:	Ransom Consulting, LLC. 400 Commercial Street Suite 404 Portland, ME 04101-4660
ATTN:	Steve Dyer
Phone:	(207) 772-2891
Project Name:	FORMER MORSE HIGH SCHOOL
Project Number:	222.06056
Report Date:	04/19/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2318873-01	SS101	SOIL	BATH, ME	04/06/23 12:11	04/10/23
L2318873-02	SS102	SOIL	BATH, ME	04/06/23 14:10	04/10/23
L2318873-03	SSDUP	SOIL	BATH, ME	04/06/23 12:15	04/10/23
L2318873-04	D101	WATER	BATH, ME	04/07/23 10:17	04/10/23
L2318873-05	DDUP	WATER	BATH, ME	04/07/23 10:20	04/10/23
L2318873-06	TRIP BLANK	SOIL	BATH, ME	04/06/23 00:00	04/10/23

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Case Narrative (continued)

Sample Receipt

The water-preserved VOA vials for Volatile Organics Low-Level analysis were received at the laboratory beyond the 48 hour holding time required for freezing. The client was notified and the results of the analysis are reported.

L2318873-04: The collection date and time on the chain of custody was 07-APR-23 10:11; however, the collection date/time on the container label was 07-APR-23 10:17. At the client's request, the collection date/time is reported as 07-APR-23 10:17.

L2318873-04 and -05: The sample was received above the appropriate pH for the EPH with MS Targets analysis. The laboratory added additional HCl; however, the pH would not adjust into the proper range.

EPH

L2318873-04D: The surrogate recoveries were outside the acceptance criteria for chloro-octadecane (3%), o-terphenyl (34%) and o-terphenyl-ms (32%), ; however, re-extraction achieved similar results: chloro-octadecane (20%), o-terphenyl (19%) and o-terphenyl-ms (17%),. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

L2318873-05D: The surrogate recoveries are below the acceptance criteria for chloro-octadecane (0%) and o-terphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Kelly O'Neill

Title: Technical Director/Representative

Date: 04/19/23

ORGANICS

VOLATILES

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-01
Client ID: SS101
Sample Location: BATH, ME

Date Collected: 04/06/23 12:11
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 04/13/23 12:54
Analyst: MKS
Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.9	--	1
1,1-Dichloroethane	ND		ug/kg	1.4	--	1
Chloroform	ND		ug/kg	2.1	--	1
Carbon tetrachloride	ND		ug/kg	1.4	--	1
1,2-Dichloropropane	ND		ug/kg	1.4	--	1
Dibromochloromethane	ND		ug/kg	1.4	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	--	1
Tetrachloroethene	ND		ug/kg	0.69	--	1
Chlorobenzene	ND		ug/kg	0.69	--	1
Trichlorofluoromethane	ND		ug/kg	5.6	--	1
1,2-Dichloroethane	ND		ug/kg	1.4	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.69	--	1
Bromodichloromethane	ND		ug/kg	0.69	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.4	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.69	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.69	--	1
1,1-Dichloropropene	ND		ug/kg	0.69	--	1
Bromoform	ND		ug/kg	5.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.69	--	1
Benzene	ND		ug/kg	0.69	--	1
Toluene	ND		ug/kg	1.4	--	1
Ethylbenzene	ND		ug/kg	1.4	--	1
Chloromethane	ND		ug/kg	5.6	--	1
Bromomethane	ND		ug/kg	2.8	--	1
Vinyl chloride	ND		ug/kg	1.4	--	1
Chloroethane	ND		ug/kg	2.8	--	1
1,1-Dichloroethene	ND		ug/kg	1.4	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.1	--	1

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-01
Client ID: SS101
Sample Location: BATH, ME

Date Collected: 04/06/23 12:11
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.69	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.8	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.8	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.8	--	1
Methyl tert butyl ether	ND		ug/kg	2.8	--	1
p/m-Xylene	ND		ug/kg	2.8	--	1
o-Xylene	ND		ug/kg	1.4	--	1
Xylenes, Total	ND		ug/kg	1.4	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.4	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.4	--	1
Dibromomethane	ND		ug/kg	2.8	--	1
1,4-Dichlorobutane	ND		ug/kg	14	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.8	--	1
Styrene	ND		ug/kg	1.4	--	1
Dichlorodifluoromethane	ND		ug/kg	14	--	1
Acetone	69		ug/kg	35	--	1
Carbon disulfide	ND		ug/kg	14	--	1
2-Butanone	ND		ug/kg	14	--	1
Vinyl acetate	ND		ug/kg	14	--	1
4-Methyl-2-pentanone	ND		ug/kg	14	--	1
2-Hexanone	ND		ug/kg	14	--	1
Ethyl methacrylate	ND		ug/kg	14	--	1
Acrylonitrile	ND		ug/kg	5.6	--	1
Bromochloromethane	ND		ug/kg	2.8	--	1
Tetrahydrofuran	ND		ug/kg	5.6	--	1
2,2-Dichloropropane	ND		ug/kg	2.8	--	1
1,2-Dibromoethane	ND		ug/kg	1.4	--	1
1,3-Dichloropropane	ND		ug/kg	2.8	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.69	--	1
Bromobenzene	ND		ug/kg	2.8	--	1
n-Butylbenzene	ND		ug/kg	1.4	--	1
sec-Butylbenzene	ND		ug/kg	1.4	--	1
tert-Butylbenzene	ND		ug/kg	2.8	--	1
o-Chlorotoluene	ND		ug/kg	2.8	--	1
p-Chlorotoluene	ND		ug/kg	2.8	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.2	--	1
Hexachlorobutadiene	ND		ug/kg	5.6	--	1

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-01
Client ID: SS101
Sample Location: BATH, ME

Date Collected: 04/06/23 12:11
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.4	--	1
p-Isopropyltoluene	ND		ug/kg	1.4	--	1
Naphthalene	ND		ug/kg	5.6	--	1
n-Propylbenzene	ND		ug/kg	1.4	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.8	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.8	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.8	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.8	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.9	--	1
Ethyl ether	ND		ug/kg	2.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	108		70-130

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-02
Client ID: SS102
Sample Location: BATH, ME

Date Collected: 04/06/23 14:10
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 04/13/23 13:15
Analyst: MKS
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.6	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.53	--	1
Chlorobenzene	ND		ug/kg	0.53	--	1
Trichlorofluoromethane	ND		ug/kg	4.2	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	--	1
Bromodichloromethane	ND		ug/kg	0.53	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.53	--	1
1,1-Dichloropropene	ND		ug/kg	0.53	--	1
Bromoform	ND		ug/kg	4.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	--	1
Benzene	ND		ug/kg	0.53	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.2	--	1
Bromomethane	ND		ug/kg	2.1	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.1	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	--	1

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS****Lab ID:** L2318873-02**Date Collected:** 04/06/23 14:10**Client ID:** SS102**Date Received:** 04/10/23**Sample Location:** BATH, ME**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.53	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	--	1
Methyl tert butyl ether	ND		ug/kg	2.1	--	1
p/m-Xylene	ND		ug/kg	2.1	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.1	--	1
1,4-Dichlorobutane	ND		ug/kg	10	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.1	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	26	--	1
Carbon disulfide	ND		ug/kg	10	--	1
2-Butanone	ND		ug/kg	10	--	1
Vinyl acetate	ND		ug/kg	10	--	1
4-Methyl-2-pentanone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Ethyl methacrylate	ND		ug/kg	10	--	1
Acrylonitrile	ND		ug/kg	4.2	--	1
Bromochloromethane	ND		ug/kg	2.1	--	1
Tetrahydrofuran	ND		ug/kg	4.2	--	1
2,2-Dichloropropane	ND		ug/kg	2.1	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,3-Dichloropropane	ND		ug/kg	2.1	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.53	--	1
Bromobenzene	ND		ug/kg	2.1	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.1	--	1
o-Chlorotoluene	ND		ug/kg	2.1	--	1
p-Chlorotoluene	ND		ug/kg	2.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	--	1
Hexachlorobutadiene	ND		ug/kg	4.2	--	1

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-02
Client ID: SS102
Sample Location: BATH, ME

Date Collected: 04/06/23 14:10
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.2	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.3	--	1
Ethyl ether	ND		ug/kg	2.1	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	112		70-130

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-03
Client ID: SSDUP
Sample Location: BATH, ME

Date Collected: 04/06/23 12:15
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 04/13/23 13:36
Analyst: MKS
Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	3.9	--	1
1,1-Dichloroethane	ND		ug/kg	0.78	--	1
Chloroform	ND		ug/kg	1.2	--	1
Carbon tetrachloride	ND		ug/kg	0.78	--	1
1,2-Dichloropropane	ND		ug/kg	0.78	--	1
Dibromochloromethane	ND		ug/kg	0.78	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.78	--	1
Tetrachloroethene	ND		ug/kg	0.39	--	1
Chlorobenzene	ND		ug/kg	0.39	--	1
Trichlorofluoromethane	ND		ug/kg	3.1	--	1
1,2-Dichloroethane	ND		ug/kg	0.78	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.39	--	1
Bromodichloromethane	ND		ug/kg	0.39	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.78	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.39	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.39	--	1
1,1-Dichloropropene	ND		ug/kg	0.39	--	1
Bromoform	ND		ug/kg	3.1	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.39	--	1
Benzene	ND		ug/kg	0.39	--	1
Toluene	ND		ug/kg	0.78	--	1
Ethylbenzene	ND		ug/kg	0.78	--	1
Chloromethane	ND		ug/kg	3.1	--	1
Bromomethane	ND		ug/kg	1.6	--	1
Vinyl chloride	ND		ug/kg	0.78	--	1
Chloroethane	ND		ug/kg	1.6	--	1
1,1-Dichloroethene	ND		ug/kg	0.78	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	--	1

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-03
Client ID: SSDUP
Sample Location: BATH, ME

Date Collected: 04/06/23 12:15
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.39	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.6	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.6	--	1
Methyl tert butyl ether	ND		ug/kg	1.6	--	1
p/m-Xylene	ND		ug/kg	1.6	--	1
o-Xylene	ND		ug/kg	0.78	--	1
Xylenes, Total	ND		ug/kg	0.78	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.78	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.78	--	1
Dibromomethane	ND		ug/kg	1.6	--	1
1,4-Dichlorobutane	ND		ug/kg	7.8	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.6	--	1
Styrene	ND		ug/kg	0.78	--	1
Dichlorodifluoromethane	ND		ug/kg	7.8	--	1
Acetone	ND		ug/kg	19	--	1
Carbon disulfide	ND		ug/kg	7.8	--	1
2-Butanone	ND		ug/kg	7.8	--	1
Vinyl acetate	ND		ug/kg	7.8	--	1
4-Methyl-2-pentanone	ND		ug/kg	7.8	--	1
2-Hexanone	ND		ug/kg	7.8	--	1
Ethyl methacrylate	ND		ug/kg	7.8	--	1
Acrylonitrile	ND		ug/kg	3.1	--	1
Bromochloromethane	ND		ug/kg	1.6	--	1
Tetrahydrofuran	ND		ug/kg	3.1	--	1
2,2-Dichloropropane	ND		ug/kg	1.6	--	1
1,2-Dibromoethane	ND		ug/kg	0.78	--	1
1,3-Dichloropropane	ND		ug/kg	1.6	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.39	--	1
Bromobenzene	ND		ug/kg	1.6	--	1
n-Butylbenzene	ND		ug/kg	0.78	--	1
sec-Butylbenzene	ND		ug/kg	0.78	--	1
tert-Butylbenzene	ND		ug/kg	1.6	--	1
o-Chlorotoluene	ND		ug/kg	1.6	--	1
p-Chlorotoluene	ND		ug/kg	1.6	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.3	--	1
Hexachlorobutadiene	ND		ug/kg	3.1	--	1

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-03
Client ID: SSDUP
Sample Location: BATH, ME

Date Collected: 04/06/23 12:15
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Isopropylbenzene	ND		ug/kg	0.78	--	1
p-Isopropyltoluene	ND		ug/kg	0.78	--	1
Naphthalene	ND		ug/kg	3.1	--	1
n-Propylbenzene	ND		ug/kg	0.78	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.6	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.6	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.6	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	3.9	--	1
Ethyl ether	ND		ug/kg	1.6	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	109		70-130

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-06
Client ID: TRIP BLANK
Sample Location: BATH, ME

Date Collected: 04/06/23 00:00
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 04/13/23 14:59
Analyst: MKS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.5	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.50	--	1
Chlorobenzene	ND		ug/kg	0.50	--	1
Trichlorofluoromethane	ND		ug/kg	4.0	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	--	1
Bromodichloromethane	ND		ug/kg	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--	1
1,1-Dichloropropene	ND		ug/kg	0.50	--	1
Bromoform	ND		ug/kg	4.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Benzene	ND		ug/kg	0.50	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.0	--	1
Bromomethane	ND		ug/kg	2.0	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.0	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--	1

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS****Lab ID:** L2318873-06**Date Collected:** 04/06/23 00:00**Client ID:** TRIP BLANK**Date Received:** 04/10/23**Sample Location:** BATH, ME**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.50	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	--	1
Methyl tert butyl ether	ND		ug/kg	2.0	--	1
p/m-Xylene	ND		ug/kg	2.0	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.0	--	1
1,4-Dichlorobutane	ND		ug/kg	10	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	25	--	1
Carbon disulfide	ND		ug/kg	10	--	1
2-Butanone	ND		ug/kg	10	--	1
Vinyl acetate	ND		ug/kg	10	--	1
4-Methyl-2-pentanone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Ethyl methacrylate	ND		ug/kg	10	--	1
Acrylonitrile	ND		ug/kg	4.0	--	1
Bromochloromethane	ND		ug/kg	2.0	--	1
Tetrahydrofuran	ND		ug/kg	4.0	--	1
2,2-Dichloropropane	ND		ug/kg	2.0	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,3-Dichloropropane	ND		ug/kg	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Bromobenzene	ND		ug/kg	2.0	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.0	--	1
o-Chlorotoluene	ND		ug/kg	2.0	--	1
p-Chlorotoluene	ND		ug/kg	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--	1
Hexachlorobutadiene	ND		ug/kg	4.0	--	1

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-06
Client ID: TRIP BLANK
Sample Location: BATH, ME

Date Collected: 04/06/23 00:00
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.0	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--	1
Ethyl ether	ND		ug/kg	2.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	108		70-130

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/13/23 08:43
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-03,06 Batch: WG1766482-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
2-Chloroethylvinyl ether	ND		ug/kg	20	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/13/23 08:43
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-03,06 Batch: WG1766482-5					
Trichloroethene	ND		ug/kg	0.50	--
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrolein	ND		ug/kg	25	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/13/23 08:43
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-03,06 Batch: WG1766482-5					
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Isopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Tert-Butyl Alcohol	ND		ug/kg	20	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--
Methyl cyclohexane	ND		ug/kg	4.0	--

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/13/23 08:43
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-03,06 Batch: WG1766482-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	4.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-03,06 Batch: WG1766482-3 WG1766482-4								
Methylene chloride	96		97		70-130	1		30
1,1-Dichloroethane	92		92		70-130	0		30
Chloroform	102		103		70-130	1		30
Carbon tetrachloride	99		100		70-130	1		30
1,2-Dichloropropane	88		90		70-130	2		30
Dibromochloromethane	92		91		70-130	1		30
1,1,2-Trichloroethane	89		89		70-130	0		30
2-Chloroethylvinyl ether	88		88		70-130	0		30
Tetrachloroethene	86		86		70-130	0		30
Chlorobenzene	92		91		70-130	1		30
Trichlorofluoromethane	109		110		70-139	1		30
1,2-Dichloroethane	102		103		70-130	1		30
1,1,1-Trichloroethane	102		106		70-130	4		30
Bromodichloromethane	98		99		70-130	1		30
trans-1,3-Dichloropropene	87		88		70-130	1		30
cis-1,3-Dichloropropene	94		94		70-130	0		30
1,1-Dichloropropene	100		101		70-130	1		30
Bromoform	86		85		70-130	1		30
1,1,2,2-Tetrachloroethane	87		84		70-130	4		30
Benzene	98		100		70-130	2		30
Toluene	87		88		70-130	1		30
Ethylbenzene	92		91		70-130	1		30
Chloromethane	72		72		52-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-03,06 Batch: WG1766482-3 WG1766482-4								
Bromomethane	119		118		57-147	1		30
Vinyl chloride	83		84		67-130	1		30
Chloroethane	103		106		50-151	3		30
1,1-Dichloroethene	103		106		65-135	3		30
trans-1,2-Dichloroethene	96		96		70-130	0		30
Trichloroethene	101		104		70-130	3		30
1,2-Dichlorobenzene	92		88		70-130	4		30
1,3-Dichlorobenzene	92		88		70-130	4		30
1,4-Dichlorobenzene	92		88		70-130	4		30
Methyl tert butyl ether	100		102		66-130	2		30
p/m-Xylene	93		94		70-130	1		30
o-Xylene	95		93		70-130	2		30
cis-1,2-Dichloroethene	93		96		70-130	3		30
Dibromomethane	97		98		70-130	1		30
1,4-Dichlorobutane	80		79		70-130	1		30
1,2,3-Trichloropropane	96		94		68-130	2		30
Styrene	98		96		70-130	2		30
Dichlorodifluoromethane	80		80		30-146	0		30
Acetone	130		136		54-140	5		30
Carbon disulfide	97		100		59-130	3		30
2-Butanone	78		81		70-130	4		30
Vinyl acetate	95		90		70-130	5		30
4-Methyl-2-pentanone	75		76		70-130	1		30

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-03,06 Batch: WG1766482-3 WG1766482-4								
2-Hexanone	72		73		70-130	1		30
Ethyl methacrylate	83		84		70-130	1		30
Acrolein	81		81		70-130	0		30
Acrylonitrile	87		87		70-130	0		30
Bromochloromethane	99		100		70-130	1		30
Tetrahydrofuran	84		92		66-130	9		30
2,2-Dichloropropane	96		97		70-130	1		30
1,2-Dibromoethane	93		92		70-130	1		30
1,3-Dichloropropane	92		92		69-130	0		30
1,1,1,2-Tetrachloroethane	94		94		70-130	0		30
Bromobenzene	90		87		70-130	3		30
n-Butylbenzene	93		88		70-130	6		30
sec-Butylbenzene	91		88		70-130	3		30
tert-Butylbenzene	91		86		70-130	6		30
1,3,5-Trichlorobenzene	96		90		70-139	6		30
o-Chlorotoluene	106		102		70-130	4		30
p-Chlorotoluene	89		85		70-130	5		30
1,2-Dibromo-3-chloropropane	79		80		68-130	1		30
Hexachlorobutadiene	94		88		67-130	7		30
Isopropylbenzene	90		87		70-130	3		30
p-Isopropyltoluene	91		87		70-130	4		30
Naphthalene	89		86		70-130	3		30
n-Propylbenzene	91		87		70-130	4		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318873

Project Number: 222.06056

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-03,06 Batch: WG1766482-3 WG1766482-4								
1,2,3-Trichlorobenzene	95		91		70-130	4		30
1,2,4-Trichlorobenzene	93		88		70-130	6		30
1,3,5-Trimethylbenzene	91		87		70-130	4		30
1,2,4-Trimethylbenzene	91		86		70-130	6		30
trans-1,4-Dichloro-2-butene	87		86		70-130	1		30
Ethyl ether	99		101		67-130	2		30
Methyl Acetate	89		92		65-130	3		30
Ethyl Acetate	91		93		70-130	2		30
Isopropyl Ether	86		87		66-130	1		30
Cyclohexane	87		87		70-130	0		30
Tert-Butyl Alcohol	90		93		70-130	3		30
Ethyl-Tert-Butyl-Ether	94		95		70-130	1		30
Tertiary-Amyl Methyl Ether	96		97		70-130	1		30
1,4-Dioxane	91		91		65-136	0		30
Methyl cyclohexane	94		95		70-130	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	105		110		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		111		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	91		90		70-130
Dibromofluoromethane	106		107		70-130

SEMIVOLATILES

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-01
Client ID: SS101
Sample Location: BATH, ME

Date Collected: 04/06/23 12:11
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E-SIM
Analytical Date: 04/15/23 15:52
Analyst: JJW
Percent Solids: 89%

Extraction Method: EPA 3546
Extraction Date: 04/14/23 20:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	7.3	--	1
2-Chloronaphthalene	ND		ug/kg	7.3	--	1
Fluoranthene	61		ug/kg	7.3	--	1
Naphthalene	ND		ug/kg	7.3	--	1
Benzo(a)anthracene	34		ug/kg	7.3	--	1
Benzo(a)pyrene	34		ug/kg	7.3	--	1
Benzo(b)fluoranthene	46		ug/kg	7.3	--	1
Benzo(k)fluoranthene	12		ug/kg	7.3	--	1
Chrysene	34		ug/kg	7.3	--	1
Acenaphthylene	ND		ug/kg	7.3	--	1
Anthracene	8.4		ug/kg	7.3	--	1
Benzo(ghi)perylene	20		ug/kg	7.3	--	1
Fluorene	ND		ug/kg	7.3	--	1
Phenanthrene	36		ug/kg	7.3	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	7.3	--	1
Indeno(1,2,3-cd)pyrene	24		ug/kg	7.3	--	1
Pyrene	51		ug/kg	7.3	--	1
1-Methylnaphthalene	ND		ug/kg	7.3	--	1
2-Methylnaphthalene	ND		ug/kg	7.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	78		30-120
4-Terphenyl-d14	75		18-120

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-02
Client ID: SS102
Sample Location: BATH, ME

Date Collected: 04/06/23 14:10
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E-SIM
Analytical Date: 04/15/23 16:08
Analyst: JJW
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 04/14/23 20:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	9.3		ug/kg	7.1	--	1
2-Chloronaphthalene	ND		ug/kg	7.1	--	1
Fluoranthene	170		ug/kg	7.1	--	1
Naphthalene	ND		ug/kg	7.1	--	1
Benzo(a)anthracene	96		ug/kg	7.1	--	1
Benzo(a)pyrene	100		ug/kg	7.1	--	1
Benzo(b)fluoranthene	120		ug/kg	7.1	--	1
Benzo(k)fluoranthene	36		ug/kg	7.1	--	1
Chrysene	89		ug/kg	7.1	--	1
Acenaphthylene	11		ug/kg	7.1	--	1
Anthracene	21		ug/kg	7.1	--	1
Benzo(ghi)perylene	66		ug/kg	7.1	--	1
Fluorene	7.3		ug/kg	7.1	--	1
Phenanthrene	87		ug/kg	7.1	--	1
Dibenzo(a,h)anthracene	16		ug/kg	7.1	--	1
Indeno(1,2,3-cd)pyrene	80		ug/kg	7.1	--	1
Pyrene	150		ug/kg	7.1	--	1
1-Methylnaphthalene	ND		ug/kg	7.1	--	1
2-Methylnaphthalene	ND		ug/kg	7.1	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	72		30-120
4-Terphenyl-d14	66		18-120

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-03
Client ID: SSDUP
Sample Location: BATH, ME

Date Collected: 04/06/23 12:15
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8270E-SIM
Analytical Date: 04/15/23 16:24
Analyst: JJW
Percent Solids: 94%

Extraction Method: EPA 3546
Extraction Date: 04/14/23 20:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	7.0	--	1
2-Chloronaphthalene	ND		ug/kg	7.0	--	1
Fluoranthene	45		ug/kg	7.0	--	1
Naphthalene	ND		ug/kg	7.0	--	1
Benzo(a)anthracene	26		ug/kg	7.0	--	1
Benzo(a)pyrene	30		ug/kg	7.0	--	1
Benzo(b)fluoranthene	38		ug/kg	7.0	--	1
Benzo(k)fluoranthene	9.4		ug/kg	7.0	--	1
Chrysene	24		ug/kg	7.0	--	1
Acenaphthylene	ND		ug/kg	7.0	--	1
Anthracene	ND		ug/kg	7.0	--	1
Benzo(ghi)perylene	18		ug/kg	7.0	--	1
Fluorene	ND		ug/kg	7.0	--	1
Phenanthrene	19		ug/kg	7.0	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	7.0	--	1
Indeno(1,2,3-cd)pyrene	21		ug/kg	7.0	--	1
Pyrene	42		ug/kg	7.0	--	1
1-Methylnaphthalene	ND		ug/kg	7.0	--	1
2-Methylnaphthalene	ND		ug/kg	7.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	101		23-120
2-Fluorobiphenyl	80		30-120
4-Terphenyl-d14	84		18-120

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
 Analytical Date: 04/15/23 15:35
 Analyst: JJW

Extraction Method: EPA 3546
 Extraction Date: 04/14/23 20:10

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1767037-1					
Acenaphthene	ND		ug/kg	6.6	--
2-Chloronaphthalene	ND		ug/kg	6.6	--
Fluoranthene	ND		ug/kg	6.6	--
Naphthalene	ND		ug/kg	6.6	--
Benzo(a)anthracene	ND		ug/kg	6.6	--
Benzo(a)pyrene	ND		ug/kg	6.6	--
Benzo(b)fluoranthene	ND		ug/kg	6.6	--
Benzo(k)fluoranthene	ND		ug/kg	6.6	--
Chrysene	ND		ug/kg	6.6	--
Acenaphthylene	ND		ug/kg	6.6	--
Anthracene	ND		ug/kg	6.6	--
Benzo(ghi)perylene	ND		ug/kg	6.6	--
Fluorene	ND		ug/kg	6.6	--
Phenanthrene	ND		ug/kg	6.6	--
Dibenzo(a,h)anthracene	ND		ug/kg	6.6	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	6.6	--
Pyrene	ND		ug/kg	6.6	--
1-Methylnaphthalene	ND		ug/kg	6.6	--
2-Methylnaphthalene	ND		ug/kg	6.6	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	61		30-120
4-Terphenyl-d14	60		18-120

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1767037-2 WG1767037-3								
Acenaphthene	75		76		40-140	1		50
2-Chloronaphthalene	73		72		40-140	1		50
Fluoranthene	79		76		40-140	4		50
Naphthalene	73		74		40-140	1		50
Benzo(a)anthracene	80		86		40-140	7		50
Benzo(a)pyrene	85		87		40-140	2		50
Benzo(b)fluoranthene	94		91		40-140	3		50
Benzo(k)fluoranthene	72		82		40-140	13		50
Chrysene	74		76		40-140	3		50
Acenaphthylene	75		75		40-140	0		50
Anthracene	80		83		40-140	4		50
Benzo(ghi)perylene	89		88		40-140	1		50
Fluorene	77		79		40-140	3		50
Phenanthrene	80		82		40-140	2		50
Dibenzo(a,h)anthracene	93		92		40-140	1		50
Indeno(1,2,3-cd)pyrene	110		105		40-140	5		50
Pyrene	79		76		35-142	4		50
1-Methylnaphthalene	72		71		40-140	1		50
2-Methylnaphthalene	78		79		40-140	1		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1767037-2 WG1767037-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	94		95		23-120
2-Fluorobiphenyl	73		74		30-120
4-Terphenyl-d14	80		77		18-120

PETROLEUM HYDROCARBONS

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-01

Client ID: SS101

Sample Location: BATH, ME

Date Collected: 04/06/23 12:11

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 135,EPH-19-2.1

Analytical Date: 04/19/23 11:28

Analyst: MEO

Percent Solids: 89%

Extraction Method: EPA 3546

Extraction Date: 04/19/23 00:22

Cleanup Method1: EPH-19-2.1

Cleanup Date1: 04/19/23

Quality Control Information

Condition of sample received:

Satisfactory

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method:

Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	7.43	--	1
C19-C36 Aliphatics	ND		mg/kg	7.43	--	1
C11-C22 Aromatics	ND		mg/kg	7.43	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	73		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	85		40-140

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-02

Client ID: SS102

Sample Location: BATH, ME

Date Collected: 04/06/23 14:10

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 135,EPH-19-2.1

Analytical Date: 04/19/23 11:53

Analyst: MEO

Percent Solids: 93%

Extraction Method: EPA 3546

Extraction Date: 04/19/23 00:22

Cleanup Method1: EPH-19-2.1

Cleanup Date1: 04/19/23

Quality Control Information

Condition of sample received:

Satisfactory

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method:

Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	6.96	--	1
C19-C36 Aliphatics	ND		mg/kg	6.96	--	1
C11-C22 Aromatics	11.5		mg/kg	6.96	--	1
C11-C22 Aromatics, Adjusted	10.7		mg/kg	6.96	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	83		40-140

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-03

Client ID: SSDUP

Sample Location: BATH, ME

Date Collected: 04/06/23 12:15

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 135,EPH-19-2.1

Analytical Date: 04/19/23 12:18

Analyst: MEO

Percent Solids: 94%

Extraction Method: EPA 3546

Extraction Date: 04/19/23 00:22

Cleanup Method1: EPH-19-2.1

Cleanup Date1: 04/19/23

Quality Control Information

Condition of sample received:

Satisfactory

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method:

Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

C9-C18 Aliphatics	ND		mg/kg	6.82	--	1
C19-C36 Aliphatics	ND		mg/kg	6.82	--	1
C11-C22 Aromatics	ND		mg/kg	6.82	--	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.82	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	77		40-140

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-04 REVD

Client ID: D101

Sample Location: BATH, ME

Date Collected: 04/07/23 10:17

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 135,EPH-19-2.1

Analytical Date: 04/19/23 13:45

Analyst: MTC

M.S. Analytical Date: 04/19/23 13:48

M.S. Analyst: RP

Extraction Method: EPA 3510C

Extraction Date: 04/18/23 12:05

Cleanup Method1: EPH-19-2.1

Cleanup Date1: 04/19/23

Quality Control Information

Condition of sample received:

Satisfactory

Aqueous Preservative:

SEE NARRATIVE

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method:

Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/Targets via GCMS-SIM - Westborough Lab

C9-C18 Aliphatics	3080		ug/l	1000	--	10
C19-C36 Aliphatics	19900		ug/l	1000	--	10
C11-C22 Aromatics	19000		ug/l	1000	--	10
C11-C22 Aromatics, Adjusted	19000		ug/l	1000	--	10
Naphthalene	ND		ug/l	4.00	--	10
2-Methylnaphthalene	ND		ug/l	4.00	--	10
Acenaphthylene	ND		ug/l	4.00	--	10
Acenaphthene	ND		ug/l	4.00	--	10
Fluorene	ND		ug/l	4.00	--	10
Phenanthrene	ND		ug/l	4.00	--	10
Anthracene	ND		ug/l	4.00	--	10
Fluoranthene	ND		ug/l	4.00	--	10
Pyrene	ND		ug/l	4.00	--	10
Benzo(a)anthracene	ND		ug/l	4.00	--	10
Chrysene	ND		ug/l	4.00	--	10
Benzo(b)fluoranthene	ND		ug/l	4.00	--	10
Benzo(k)fluoranthene	ND		ug/l	4.00	--	10
Benzo(a)pyrene	ND		ug/l	2.00	--	10
Indeno(1,2,3-cd)Pyrene	ND		ug/l	4.00	--	10
Dibenzo(a,h)anthracene	ND		ug/l	4.00	--	10
Benzo(ghi)perylene	ND		ug/l	4.00	--	10

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-04 REID

Date Collected: 04/07/23 10:17

Client ID: D101

Date Received: 04/10/23

Sample Location: BATH, ME

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/Targets via GCMS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	20	Q	40-140
o-Terphenyl	19	Q	40-140
2-Fluorobiphenyl	61		40-140
2-Bromonaphthalene	59		40-140
O-Terphenyl-MS	17	Q	40-140

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-04 D

Client ID: D101

Sample Location: BATH, ME

Date Collected: 04/07/23 10:17

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 135,EPH-19-2.1

Analytical Date: 04/17/23 11:29

Analyst: MTC

M.S. Analytical Date: 04/17/23 09:06

M.S. Analyst: JJW

Extraction Method: EPA 3510C

Extraction Date: 04/14/23 12:47

Cleanup Method1: EPH-19-2.1

Cleanup Date1: 04/14/23

Quality Control Information

Condition of sample received:

Satisfactory

Aqueous Preservative:

SEE NARRATIVE

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method:

Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/Targets via GCMS-SIM - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	1000	--	10
C19-C36 Aliphatics	2790		ug/l	1000	--	10
C11-C22 Aromatics	4090		ug/l	1000	--	10
C11-C22 Aromatics, Adjusted	4090		ug/l	1000	--	10
Naphthalene	ND		ug/l	4.00	--	10
2-Methylnaphthalene	ND		ug/l	4.00	--	10
Acenaphthylene	ND		ug/l	4.00	--	10
Acenaphthene	ND		ug/l	4.00	--	10
Fluorene	ND		ug/l	4.00	--	10
Phenanthrene	ND		ug/l	4.00	--	10
Anthracene	ND		ug/l	4.00	--	10
Fluoranthene	ND		ug/l	4.00	--	10
Pyrene	ND		ug/l	4.00	--	10
Benzo(a)anthracene	ND		ug/l	4.00	--	10
Chrysene	ND		ug/l	4.00	--	10
Benzo(b)fluoranthene	ND		ug/l	4.00	--	10
Benzo(k)fluoranthene	ND		ug/l	4.00	--	10
Benzo(a)pyrene	ND		ug/l	2.00	--	10
Indeno(1,2,3-cd)Pyrene	ND		ug/l	4.00	--	10
Dibenzo(a,h)anthracene	ND		ug/l	4.00	--	10
Benzo(ghi)perylene	ND		ug/l	4.00	--	10

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-04 D

Date Collected: 04/07/23 10:17

Client ID: D101

Date Received: 04/10/23

Sample Location: BATH, ME

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/Targets via GCMS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	3	Q	40-140
o-Terphenyl	34	Q	40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	77		40-140
O-Terphenyl-MS	32	Q	40-140

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-05 D

Client ID: DDUP

Sample Location: BATH, ME

Date Collected: 04/07/23 10:20

Date Received: 04/10/23

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 135,EPH-19-2.1

Analytical Date: 04/19/23 14:20

Analyst: MTC

M.S. Analytical Date: 04/19/23 14:04

M.S. Analyst: RP

Extraction Method: EPA 3510C

Extraction Date: 04/18/23 12:05

Cleanup Method1: EPH-19-2.1

Cleanup Date1: 04/19/23

Quality Control Information

Condition of sample received:

Satisfactory

Aqueous Preservative:

SEE NARRATIVE

Sample Temperature upon receipt:

Received on Ice

Sample Extraction method:

Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/Targets via GCMS-SIM - Westborough Lab						
C9-C18 Aliphatics	2580		ug/l	2000	--	20
C19-C36 Aliphatics	13000		ug/l	2000	--	20
C11-C22 Aromatics	16700		ug/l	2000	--	20
C11-C22 Aromatics, Adjusted	16700		ug/l	2000	--	20
Naphthalene	ND		ug/l	8.00	--	20
2-Methylnaphthalene	ND		ug/l	8.00	--	20
Acenaphthylene	ND		ug/l	8.00	--	20
Acenaphthene	ND		ug/l	8.00	--	20
Fluorene	ND		ug/l	8.00	--	20
Phenanthrene	ND		ug/l	8.00	--	20
Anthracene	ND		ug/l	8.00	--	20
Fluoranthene	ND		ug/l	8.00	--	20
Pyrene	ND		ug/l	8.00	--	20
Benzo(a)anthracene	ND		ug/l	8.00	--	20
Chrysene	ND		ug/l	8.00	--	20
Benzo(b)fluoranthene	ND		ug/l	8.00	--	20
Benzo(k)fluoranthene	ND		ug/l	8.00	--	20
Benzo(a)pyrene	ND		ug/l	4.00	--	20
Indeno(1,2,3-cd)Pyrene	ND		ug/l	8.00	--	20
Dibenzo(a,h)anthracene	ND		ug/l	8.00	--	20
Benzo(ghi)perylene	ND		ug/l	8.00	--	20

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-05 D

Date Collected: 04/07/23 10:20

Client ID: DDUP

Date Received: 04/10/23

Sample Location: BATH, ME

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/Targets via GCMS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	0	Q	40-140
o-Terphenyl	0	Q	40-140
2-Fluorobiphenyl	60		40-140
2-Bromonaphthalene	62		40-140
O-Terphenyl-MS	69		40-140

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis Batch Quality Control

Analytical Method: 135,EPH-19-2.1
 Analytical Date: 04/15/23 20:28
 Analyst: CRE

M.S. Analytical Date: 04/15/23 13:25
 M.S. Analyst: JJW

Extraction Method: EPA 3510C
 Extraction Date: 04/14/23 12:47
 Cleanup Method: EPH-19-2.1
 Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL
EPH w/Targets via GCMS-SIM - Westborough Lab for sample(s): 04 Batch: WG1766912-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	0.400	--
2-Methylnaphthalene	ND		ug/l	0.400	--
Acenaphthylene	ND		ug/l	0.400	--
Acenaphthene	ND		ug/l	0.400	--
Fluorene	ND		ug/l	0.400	--
Phenanthrene	ND		ug/l	0.400	--
Anthracene	ND		ug/l	0.400	--
Fluoranthene	ND		ug/l	0.400	--
Pyrene	ND		ug/l	0.400	--
Benzo(a)anthracene	ND		ug/l	0.400	--
Chrysene	ND		ug/l	0.400	--
Benzo(b)fluoranthene	ND		ug/l	0.400	--
Benzo(k)fluoranthene	ND		ug/l	0.400	--
Benzo(a)pyrene	ND		ug/l	0.200	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--
Benzo(ghi)perylene	ND		ug/l	0.400	--

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 135,EPH-19-2.1
Analytical Date: 04/15/23 20:28
Analyst: CRE

M.S. Analytical Date: 04/15/23 13:25
M.S. Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 04/14/23 12:47
Cleanup Method: EPH-19-2.1
Cleanup Date: 04/14/23

Parameter	Result	Qualifier	Units	RL	MDL
EPH w/Targets via GCMS-SIM - Westborough Lab for sample(s): 04 Batch: WG1766912-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	72		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	61		40-140
2-Bromonaphthalene	62		40-140
O-Terphenyl-MS	71		40-140

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis Batch Quality Control

Analytical Method: 135,EPH-19-2.1
 Analytical Date: 04/18/23 09:48
 Analyst: ALL

M.S. Analytical Date: 04/18/23 08:59
 M.S. Analyst: AH

Extraction Method: EPA 3510C
 Extraction Date: 04/17/23 21:26
 Cleanup Method: EPH-19-2.1
 Cleanup Date: 04/18/23

Parameter	Result	Qualifier	Units	RL	MDL
EPH w/Targets via GCMS-SIM - Westborough Lab for sample(s): 04-05 Batch: WG1767845-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	0.400	--
2-Methylnaphthalene	ND		ug/l	0.400	--
Acenaphthylene	ND		ug/l	0.400	--
Acenaphthene	ND		ug/l	0.400	--
Fluorene	ND		ug/l	0.400	--
Phenanthrene	ND		ug/l	0.400	--
Anthracene	ND		ug/l	0.400	--
Fluoranthene	ND		ug/l	0.400	--
Pyrene	ND		ug/l	0.400	--
Benzo(a)anthracene	ND		ug/l	0.400	--
Chrysene	ND		ug/l	0.400	--
Benzo(b)fluoranthene	ND		ug/l	0.400	--
Benzo(k)fluoranthene	ND		ug/l	0.400	--
Benzo(a)pyrene	ND		ug/l	0.200	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--
Benzo(ghi)perylene	ND		ug/l	0.400	--

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 135,EPH-19-2.1
 Analytical Date: 04/18/23 09:48
 Analyst: ALL

M.S. Analytical Date: 04/18/23 08:59
 M.S. Analyst: AH

Extraction Method: EPA 3510C
 Extraction Date: 04/17/23 21:26
 Cleanup Method: EPH-19-2.1
 Cleanup Date: 04/18/23

Parameter	Result	Qualifier	Units	RL	MDL
EPH w/Targets via GCMS-SIM - Westborough Lab for sample(s): 04-05 Batch: WG1767845-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	70		40-140
O-Terphenyl-MS	71		40-140

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 135,EPH-19-2.1
 Analytical Date: 04/19/23 11:03
 Analyst: MEO

Extraction Method: EPA 3546
 Extraction Date: 04/19/23 00:22
 Cleanup Method: EPH-19-2.1
 Cleanup Date: 04/19/23

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03 Batch: WG1768338-1					
C9-C18 Aliphatics	ND		mg/kg	6.30	--
C19-C36 Aliphatics	ND		mg/kg	6.30	--
C11-C22 Aromatics	ND		mg/kg	6.30	--
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.30	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	82		40-140

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318873

Project Number: 222.06056

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
EPH w/Targets via GCMS-SIM - Westborough Lab Associated sample(s): 04 Batch: WG1766912-2 WG1766912-3								
C9-C18 Aliphatics	84		69		40-140	20		25
C19-C36 Aliphatics	83		82		40-140	1		25
C11-C22 Aromatics	72		72		40-140	0		25
Naphthalene	78		72		40-140	8		25
2-Methylnaphthalene	87		79		40-140	10		25
Acenaphthylene	82		72		40-140	13		25
Acenaphthene	84		78		40-140	7		25
Fluorene	90		83		40-140	8		25
Phenanthrene	92		88		40-140	4		25
Anthracene	94		89		40-140	5		25
Fluoranthene	96		90		40-140	6		25
Pyrene	98		94		40-140	4		25
Benzo(a)anthracene	94		88		40-140	7		25
Chrysene	99		97		40-140	2		25
Benzo(b)fluoranthene	98		95		40-140	3		25
Benzo(k)fluoranthene	91		82		40-140	10		25
Benzo(a)pyrene	106		100		40-140	6		25
Indeno(1,2,3-cd)Pyrene	104		99		40-140	5		25
Dibenzo(a,h)anthracene	98		96		40-140	2		25
Benzo(ghi)perylene	87		83		40-140	5		25

Lab Control Sample Analysis**Batch Quality Control****Project Name:** FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
EPH w/Targets via GCMS-SIM - Westborough Lab Associated sample(s): 04 Batch: WG1766912-2 WG1766912-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	68		73		40-140
o-Terphenyl	67		66		40-140
2-Fluorobiphenyl	71		71		40-140
2-Bromonaphthalene	73		73		40-140
O-Terphenyl-MS	91		85		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
EPH w/Targets via GCMS-SIM - Westborough Lab Associated sample(s): 04-05 Batch: WG1767845-2 WG1767845-3								
C9-C18 Aliphatics	45		53		40-140	16		25
C19-C36 Aliphatics	70		67		40-140	4		25
C11-C22 Aromatics	73		67		40-140	9		25
Naphthalene	78		71		40-140	9		25
2-Methylnaphthalene	88		79		40-140	11		25
Acenaphthylene	83		74		40-140	11		25
Acenaphthene	84		75		40-140	11		25
Fluorene	88		79		40-140	11		25
Phenanthrene	87		78		40-140	11		25
Anthracene	90		81		40-140	11		25
Fluoranthene	91		81		40-140	12		25
Pyrene	93		82		40-140	13		25
Benzo(a)anthracene	94		83		40-140	12		25
Chrysene	93		84		40-140	10		25
Benzo(b)fluoranthene	94		80		40-140	16		25
Benzo(k)fluoranthene	82		77		40-140	6		25
Benzo(a)pyrene	101		89		40-140	13		25
Indeno(1,2,3-cd)Pyrene	105		94		40-140	11		25
Dibenzo(a,h)anthracene	94		85		40-140	10		25
Benzo(ghi)perylene	84		76		40-140	10		25

Lab Control Sample Analysis**Batch Quality Control****Project Name:** FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
EPH w/Targets via GCMS-SIM - Westborough Lab Associated sample(s): 04-05 Batch: WG1767845-2 WG1767845-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	63		60		40-140
o-Terphenyl	70		64		40-140
2-Fluorobiphenyl	72		69		40-140
2-Bromonaphthalene	73		69		40-140
O-Terphenyl-MS	88		80		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis **Batch Quality Control**

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1768338-2 WG1768338-3								
C9-C18 Aliphatics	68		61		40-140	11		25
C19-C36 Aliphatics	84		79		40-140	6		25
C11-C22 Aromatics	76		82		40-140	8		25
Naphthalene	68		71		40-140	4		25
2-Methylnaphthalene	70		73		40-140	4		25
Acenaphthylene	70		72		40-140	3		25
Acenaphthene	74		75		40-140	1		25
Fluorene	74		77		40-140	4		25
Phenanthrene	74		79		40-140	7		25
Anthracene	75		80		40-140	6		25
Fluoranthene	74		82		40-140	10		25
Pyrene	74		82		40-140	10		25
Benzo(a)anthracene	74		82		40-140	10		25
Chrysene	73		81		40-140	10		25
Benzo(b)fluoranthene	70		78		40-140	11		25
Benzo(k)fluoranthene	69		76		40-140	10		25
Benzo(a)pyrene	75		82		40-140	9		25
Indeno(1,2,3-cd)Pyrene	70		77		40-140	10		25
Dibenzo(a,h)anthracene	69		77		40-140	11		25
Benzo(ghi)perylene	64		72		40-140	12		25

Lab Control Sample Analysis**Batch Quality Control****Project Name:** FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1768338-2 WG1768338-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	73		67		40-140
o-Terphenyl	68		73		40-140
2-Fluorobiphenyl	80		89		40-140
2-Bromonaphthalene	80		89		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

PCBS

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-04
Client ID: D101
Sample Location: BATH, ME

Date Collected: 04/07/23 10:17
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 04/16/23 13:49
Analyst: ER

Extraction Method: EPA 3510C
Extraction Date: 04/15/23 00:26
Cleanup Method: EPA 3665A
Cleanup Date: 04/15/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/15/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.149	--	1	A
Aroclor 1221	ND		ug/l	0.149	--	1	A
Aroclor 1232	ND		ug/l	0.149	--	1	A
Aroclor 1242	ND		ug/l	0.149	--	1	A
Aroclor 1248	ND		ug/l	0.149	--	1	A
Aroclor 1254	ND		ug/l	0.149	--	1	A
Aroclor 1260	ND		ug/l	0.149	--	1	A
Aroclor 1262	ND		ug/l	0.149	--	1	A
Aroclor 1268	ND		ug/l	0.149	--	1	A
PCBs, Total	ND		ug/l	0.149	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	47		30-150	A
Decachlorobiphenyl	39		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-05
Client ID: DDUP
Sample Location: BATH, ME

Date Collected: 04/07/23 10:20
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 04/16/23 13:58
Analyst: ER

Extraction Method: EPA 3510C
Extraction Date: 04/15/23 00:26
Cleanup Method: EPA 3665A
Cleanup Date: 04/15/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/15/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.146	--	1	A
Aroclor 1221	ND		ug/l	0.146	--	1	A
Aroclor 1232	ND		ug/l	0.146	--	1	A
Aroclor 1242	ND		ug/l	0.146	--	1	A
Aroclor 1248	ND		ug/l	0.146	--	1	A
Aroclor 1254	ND		ug/l	0.146	--	1	A
Aroclor 1260	ND		ug/l	0.146	--	1	A
Aroclor 1262	ND		ug/l	0.146	--	1	A
Aroclor 1268	ND		ug/l	0.146	--	1	A
PCBs, Total	ND		ug/l	0.146	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	45		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 04/16/23 13:23
Analyst: ER

Extraction Method: EPA 3510C
Extraction Date: 04/15/23 00:26
Cleanup Method: EPA 3665A
Cleanup Date: 04/15/23
Cleanup Method: EPA 3660B
Cleanup Date: 04/15/23

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 04-05 Batch: WG1767064-1						
Aroclor 1016	ND		ug/l	0.127	--	A
Aroclor 1221	ND		ug/l	0.127	--	A
Aroclor 1232	ND		ug/l	0.127	--	A
Aroclor 1242	ND		ug/l	0.127	--	A
Aroclor 1248	ND		ug/l	0.127	--	A
Aroclor 1254	ND		ug/l	0.127	--	A
Aroclor 1260	ND		ug/l	0.127	--	A
Aroclor 1262	ND		ug/l	0.127	--	A
Aroclor 1268	ND		ug/l	0.127	--	A
PCBs, Total	ND		ug/l	0.127	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	A
Decachlorobiphenyl	94		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	91		30-150	B

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318873

Project Number: 222.06056

Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 04-05 Batch: WG1767064-2 WG1767064-3									
Aroclor 1016	82		88		40-140	8		50	A
Aroclor 1260	75		81		40-140	9		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		92		30-150	A
Decachlorobiphenyl	85		96		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		82		30-150	B
Decachlorobiphenyl	83		90		30-150	B

METALS

Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-01

Date Collected: 04/06/23 12:11

Client ID: SS101

Date Received: 04/10/23

Sample Location: BATH, ME

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.74		mg/kg	0.435	--	1	04/13/23 22:23	04/14/23 19:46	EPA 3050B	1,6010D	DMB
Barium, Total	27.7		mg/kg	0.428	--	1	04/15/23 07:30	04/16/23 19:40	EPA 3050B	1,6010D	AMW
Cadmium, Total	ND		mg/kg	0.435	--	1	04/13/23 22:23	04/14/23 19:46	EPA 3050B	1,6010D	DMB
Chromium, Total	13.3		mg/kg	0.435	--	1	04/13/23 22:23	04/14/23 19:46	EPA 3050B	1,6010D	DMB
Lead, Total	10.3		mg/kg	2.17	--	1	04/13/23 22:23	04/14/23 19:46	EPA 3050B	1,6010D	DMB
Mercury, Total	ND		mg/kg	0.083	--	1	04/13/23 23:26	04/14/23 16:39	EPA 7471B	1,7471B	DMB
Selenium, Total	ND		mg/kg	0.869	--	1	04/13/23 22:23	04/14/23 19:46	EPA 3050B	1,6010D	DMB
Silver, Total	ND		mg/kg	0.217	--	1	04/13/23 22:23	04/14/23 19:46	EPA 3050B	1,6010D	DMB



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-02

Date Collected: 04/06/23 14:10

Client ID: SS102

Date Received: 04/10/23

Sample Location: BATH, ME

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.08		mg/kg	0.414	--	1	04/13/23 22:23	04/14/23 19:49	EPA 3050B	1,6010D	DMB
Barium, Total	22.4		mg/kg	0.407	--	1	04/15/23 07:30	04/16/23 19:45	EPA 3050B	1,6010D	AMW
Cadmium, Total	ND		mg/kg	0.414	--	1	04/13/23 22:23	04/14/23 19:49	EPA 3050B	1,6010D	DMB
Chromium, Total	10.2		mg/kg	0.414	--	1	04/13/23 22:23	04/14/23 19:49	EPA 3050B	1,6010D	DMB
Lead, Total	11.5		mg/kg	2.07	--	1	04/13/23 22:23	04/14/23 19:49	EPA 3050B	1,6010D	DMB
Mercury, Total	ND		mg/kg	0.077	--	1	04/13/23 23:26	04/14/23 16:42	EPA 7471B	1,7471B	DMB
Selenium, Total	ND		mg/kg	0.828	--	1	04/13/23 22:23	04/14/23 19:49	EPA 3050B	1,6010D	DMB
Silver, Total	ND		mg/kg	0.207	--	1	04/13/23 22:23	04/14/23 19:49	EPA 3050B	1,6010D	DMB



Project Name: FORMER MORSE HIGH SCHOOL**Lab Number:** L2318873**Project Number:** 222.06056**Report Date:** 04/19/23**SAMPLE RESULTS**

Lab ID: L2318873-03

Date Collected: 04/06/23 12:15

Client ID: SSDUP

Date Received: 04/10/23

Sample Location: BATH, ME

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	8.29		mg/kg	0.408	--	1	04/13/23 22:23	04/14/23 19:51	EPA 3050B	1,6010D	DMB
Barium, Total	27.8		mg/kg	0.416	--	1	04/15/23 07:30	04/16/23 19:49	EPA 3050B	1,6010D	AMW
Cadmium, Total	ND		mg/kg	0.408	--	1	04/13/23 22:23	04/14/23 19:51	EPA 3050B	1,6010D	DMB
Chromium, Total	15.7		mg/kg	0.408	--	1	04/13/23 22:23	04/14/23 19:51	EPA 3050B	1,6010D	DMB
Lead, Total	12.6		mg/kg	2.04	--	1	04/13/23 22:23	04/14/23 19:51	EPA 3050B	1,6010D	DMB
Mercury, Total	ND		mg/kg	0.070	--	1	04/13/23 23:26	04/14/23 16:45	EPA 7471B	1,7471B	DMB
Selenium, Total	ND		mg/kg	0.816	--	1	04/13/23 22:23	04/14/23 19:51	EPA 3050B	1,6010D	DMB
Silver, Total	ND		mg/kg	0.204	--	1	04/13/23 22:23	04/14/23 19:51	EPA 3050B	1,6010D	DMB



Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318873

Project Number: 222.06056

Report Date: 04/19/23

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1765790-1										
Arsenic, Total	ND		mg/kg	0.400	--	1	04/13/23 22:23	04/14/23 18:47	1,6010D	DMB
Cadmium, Total	ND		mg/kg	0.400	--	1	04/13/23 22:23	04/14/23 18:47	1,6010D	DMB
Chromium, Total	ND		mg/kg	0.400	--	1	04/13/23 22:23	04/14/23 18:47	1,6010D	DMB
Lead, Total	ND		mg/kg	2.00	--	1	04/13/23 22:23	04/14/23 18:47	1,6010D	DMB
Selenium, Total	ND		mg/kg	0.800	--	1	04/13/23 22:23	04/14/23 18:47	1,6010D	DMB
Silver, Total	ND		mg/kg	0.200	--	1	04/13/23 22:23	04/14/23 18:47	1,6010D	DMB

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1765791-1										
Mercury, Total	ND		mg/kg	0.083	--	1	04/13/23 23:26	04/14/23 15:49	1,7471B	DMB

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1767090-1										
Barium, Total	ND		mg/kg	0.400	--	1	04/15/23 07:30	04/16/23 18:14	1,6010D	AMW

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1765790-2 SRM Lot Number: D116-540								
Arsenic, Total	103		-		82-119	-		
Cadmium, Total	105		-		82-118	-		
Chromium, Total	103		-		81-118	-		
Lead, Total	108		-		83-117	-		
Selenium, Total	106		-		78-122	-		
Silver, Total	103		-		79-121	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1765791-2 SRM Lot Number: D116-540								
Mercury, Total	139		-		58-142	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1767090-2 SRM Lot Number: D116-540								
Barium, Total	85		-		82-118	-		

INORGANICS & MISCELLANEOUS

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-01
Client ID: SS101
Sample Location: BATH, ME

Date Collected: 04/06/23 12:11
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.1		%	0.100	NA	1	-	04/11/23 12:06	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.898	--	1	04/13/23 13:43	04/14/23 17:00	1,7196A	WMT



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-02
Client ID: SS102
Sample Location: BATH, ME

Date Collected: 04/06/23 14:10
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.1		%	0.100	NA	1	-	04/11/23 12:06	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.859	--	1	04/13/23 13:43	04/14/23 17:00	1,7196A	WMT



Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

SAMPLE RESULTS

Lab ID: L2318873-03
Client ID: SSDUP
Sample Location: BATH, ME

Date Collected: 04/06/23 12:15
Date Received: 04/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.3		%	0.100	NA	1	-	04/11/23 12:06	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.848	--	1	04/13/23 13:43	04/14/23 17:00	1,7196A	WMT



Project Name: FORMER MORSE HIGH SCHOOL

Lab Number: L2318873

Project Number: 222.06056

Report Date: 04/19/23

Method Blank Analysis

Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1765092-2										
Solids, Total	99.6		%	0.100	NA	1	-	04/11/23 12:06	121,2540G	ROI
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1766384-1										
Chromium, Hexavalent	ND		mg/kg	0.800	--	1	04/13/23 13:43	04/14/23 17:00	1,7196A	WMT

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1766384-2								
Chromium, Hexavalent	110		-		80-120	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Lab Number: L2318873
Report Date: 04/19/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1766384-4 QC Sample: L2318873-01 Client ID: SS101												
Chromium, Hexavalent	ND	1290	1230	96		-	-		75-125	-		20

Lab Duplicate Analysis *Batch Quality Control*

Project Name: FORMER MORSE HIGH SCHOOL

Project Number: 222.06056

Lab Number: L2318873

Report Date: 04/19/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1765092-1 QC Sample: L2318873-01 Client ID: SS101						
Solids, Total	89.1	89.7	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1766384-6 QC Sample: L2318873-01 Client ID: SS101						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Serial_No:04192319:23
Lab Number: L2318873
Report Date: 04/19/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler **Custody Seal**
 B Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2318873-01A	Vial MeOH preserved	B	NA		2.5	Y	Absent		8260HLW(14)
L2318873-01B	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:25	8260HLW(14)
L2318873-01C	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:25	8260HLW(14)
L2318873-01D	Plastic 2oz unpreserved for TS	B	NA		2.5	Y	Absent		ME-TS-2540(7)
L2318873-01E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		2.5	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2318873-01F	Glass 120ml/4oz unpreserved	B	NA		2.5	Y	Absent		HEXCR-7196(30)
L2318873-01G	Glass 250ml/8oz unpreserved	B	NA		2.5	Y	Absent		EPH-20(14),PAHTCL-SIM(14)
L2318873-02A	Vial MeOH preserved	B	NA		2.5	Y	Absent		8260HLW(14)
L2318873-02B	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:25	8260HLW(14)
L2318873-02C	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:25	8260HLW(14)
L2318873-02D	Plastic 2oz unpreserved for TS	B	NA		2.5	Y	Absent		ME-TS-2540(7)
L2318873-02E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		2.5	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2318873-02F	Glass 120ml/4oz unpreserved	B	NA		2.5	Y	Absent		HEXCR-7196(30)
L2318873-02G	Glass 250ml/8oz unpreserved	B	NA		2.5	Y	Absent		PAHTCL-SIM(14),EPH-20(14)
L2318873-03A	Vial MeOH preserved	B	NA		2.5	Y	Absent		8260HLW(14)
L2318873-03B	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:25	8260HLW(14)
L2318873-03C	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:25	8260HLW(14)
L2318873-03D	Plastic 2oz unpreserved for TS	B	NA		2.5	Y	Absent		ME-TS-2540(7)
L2318873-03E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		2.5	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2318873-03F	Glass 120ml/4oz unpreserved	B	NA		2.5	Y	Absent		HEXCR-7196(30)

Project Name: FORMER MORSE HIGH SCHOOL
Project Number: 222.06056

Serial_No:04192319:23
Lab Number: L2318873
Report Date: 04/19/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2318873-03G	Glass 250ml/8oz unpreserved	B	NA		2.5	Y	Absent		EPH-20(14),PAHTCL-SIM(14)
L2318873-04A	Amber 250ml unpreserved	B	5	5	2.5	Y	Absent		PCB-8082-LVI(365)
L2318873-04B	Amber 250ml unpreserved	B	5	5	2.5	Y	Absent		PCB-8082-LVI(365)
L2318873-04C	Amber 1000ml HCl preserved	B	5	5	2.5	N	Absent		EPHD-GC-20(14),EPH-MS-20(14)
L2318873-04D	Amber 1000ml HCl preserved	B	5	5	2.5	N	Absent		EPHD-GC-20(14),EPH-MS-20(14)
L2318873-05A	Amber 250ml unpreserved	B	5	5	2.5	Y	Absent		PCB-8082-LVI(365)
L2318873-05B	Amber 250ml unpreserved	B	5	5	2.5	Y	Absent		PCB-8082-LVI(365)
L2318873-05C	Amber 1000ml HCl preserved	B	5	5	2.5	N	Absent		EPHD-GC-20(14),EPH-MS-20(14)
L2318873-05D	Amber 1000ml HCl preserved	B	5	5	2.5	N	Absent		EPHD-GC-20(14),EPH-MS-20(14)
L2318873-06A	Vial MeOH preserved	B	NA		2.5	Y	Absent		8260HLW(14)
L2318873-06B	Vial water preserved	B	NA		2.5	Y	Absent	11-APR-23 00:32	8260HLW(14)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



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Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 135 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, December 2019, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, March 1, 2020.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

